STRATEGIC ANALYSIS OF INTEGRATED PROACTION CORP.

by

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ABSTRACT

Integrated ProAction Corp (IPAC) has operated in the forestry consulting industry since 1992, offering diverse services to four primary market segments. The forestry consulting industry has become less attractive since 2002. Profits at IPAC are down in 2006, and sustainable shareholder value is compromised. A new marketing strategy is required. Labor is the most important input. Appropriate human resources policies are needed to support and implement the business and marketing strategies.

This project evaluates the dynamics of the forestry consulting industry and assesses industry attractiveness using Porter’s five forces model. Four business options are considered relative to future succession plans. SWOT analysis drives a marketing strategy. Corporate objectives, competencies and key resources are defined. Sensitivity analysis validates the chosen marketing strategy, and is used to approximate the resultant potential sale value of the company.

KEYWORDS:

forestry consulting industry; strategic analysis; repositioning; human resources
EXECUTIVE SUMMARY

Declining financial performance threatens shareholder value and other corporate objectives at Integrated ProAction Corp. (IPAC). Macro-environmental determinants have increased competitor rivalry, making the industry only moderately attractive in IPAC’s view. The shareholders, both of whom are near retirement age, are considering two primary succession plans – passive ownership or the sale of the company. Both plans are predicated on having a viable business either to pass on to new management or to sell. To this end, four primary business options are considered; wind the business down, maintaining the status quo, repositioning and ‘creative destruction’.

Repositioning, with a clearly defined marketing strategy, is the preferred option. It is the option most likely to produce the results necessary to facilitate future succession plans. It is the least risky, leverages existing core competencies and strengths, provides payment for goodwill generated by 15 years of successful operation, and is consistent with the values and culture of the owners and the company. The existing organizational structure and process design suit this strategy. ‘Creative destruction’ is too risky and is inconsistent with the near-term retirement aspirations of the owners. Winding the business down is unacceptable for a variety of financial and intrinsic reasons. The status quo option leads to business insolvency in the very near-term.

The four major market segments served by IPAC include ‘Licensee,’ ‘Government,’ ‘First Nations’ and ‘Private.’ The ‘First Nations’ and ‘Private’ segments offer superior earning potential. ‘Government’ contracts provide corporate stability, which may be desirable as the industry declines. The ‘Licensee’ segment is extremely volatile due to weak commodity prices. Dependency on the ‘Licensee’ segment increases vulnerability. The current services offered by IPAC are diversified, but about half are highly commoditized and thus produce low margins. The
marketing objective is to increase the proportion of higher margin sales. Targeting increased sales in the ‘First Nations’ and ‘Private’ market segments, and decreasing dependency on the ‘Licensee’ and ‘Government’ segments in the short-term is the basis of the marketing strategy. Growth in the ‘Private’ segment will focus on alternative industries. The marketing mix emphasizes product, place and promotion, but prices must remain competitive.

Value propositions must address customer needs and must offer something that is competitively different. IPAC competes as a differentiator - size and structure preclude cost-based strategies. The penetration strategy for alternative industries in northeast BC leverages existing project management and engineering strengths. Recent government tax incentives offered to oil and gas producers have spurred summer road-building activity. Commonality with forestry engineering and complementarities with First Nations initiatives make engineering suitable for entry and yield competitive advantage.

Quality human resources are mission critical. Labor is the primary input in the consulting industry. Emphasis on cost reductions caused IPAC to become less competitive in labor markets, relative to other sectors such as oil and gas and government. Employee retention, recruitment and motivation are essential. The quality of the labor input will be elevated by developing and implementing human resources policies which are supported by real corporate commitment. IPAC’s financial performance is highly sensitive to changes in productivity.

Conscious displacement of low margin contracts with high margin sales in preferred segments may produce ‘best case’ results similar to those achieved in 2004 and 2005. Doing so will significantly enhance the value of the company, and sets a strong foundation for succession planning. The company is ready for change. A powerful guiding coalition exists, and the eight common, internal barriers to change have been addressed.
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1 INTRODUCTION

1.1 Ownership

Integrated ProAction Corp is privately owned by two principals having equal interest. It was founded in May, 1992 under the name of Integrated Woods Services Ltd.. The company name was changed in March, 2006 to Integrated ProAction Corp. to make the company more marketable across a broader range of clients. The “Woods Services” portion of the name created customer biases and stereotyping that hampered marketing efforts in non-forestry industries.

1.2 Company History

The ownership of the company has remained the same since its start as Integrated Woods Services Ltd. (IWS) in May, 1992. Both owners are professional foresters (RPF) registered with the Association of British Columbia Forestry Professionals.

IWS was founded under unique circumstances. While working for Tolko Industries Ltd, a major licensee in the forest products manufacturing industry, the two founders recognized an opportunity. Tolko’s strategy at that time was to hire numerous individual consultants to supplement staff positions. That strategy failed to produce consistent results due in part to a lack of internal resources with which to manage contractors. In addition, huge tax liabilities loomed because the contractors were hired on an employee-like basis. In these instances, Canada Customs and Revenue could deem them to be employees. IWS was formed as an umbrella company to sub-contract individual consultants back to Tolko, adding value through contractor management and quality assurance. Under the direction of two owners and one clerical support person, IWS started operations with one large contract and a full-time equivalent of about 35 people operating under sub-contracts.
In 1993, IWS converted the sub-contractors to employees. Additional clients were sought and secured, but the company dropped to about 12 people because not all sub-contractors accepted positions as employees. The company grew from that point. It operates mostly in the interior of British Columbia with offices located in Kamloops, Clearwater, Williams Lake, Chetwynd and Fort St. John. Growth was the result of client demands for additional manpower, new technology and services, and operations in new geographic locations.

1.3 Scope and Scale of Operations

IPAC has grown to about 75 persons. Services include forestry consulting, planning, digital mapping technologies, database applications, forest engineering, bookkeeping and business analysis and management, project management and log brokerage. Tangible products include maps and various documents, as well as standing timber inventory (STI) and road alignments demarcated in the forest with survey ribbon. Quality is determined by the location of ribbons relative to topographical, hydrological or other constraining features, as well as the degree to which the 'layout' considers harvesting equipment capabilities. The products are physical manifestations of various professional decisions that balance economic, environmental, social and regulatory considerations. Forestry consulting is knowledge-based business.

To complement consulting operations, IPAC also provides log marketing and log brokerage services. Major licensees purchase raw logs to supplement log deliveries derived from company-held forest tenures. IPAC typically represents seller interests. Most major licensees have log buyers who are responsible for purchasing a budgeted volume of logs each year.

IPAC is a large, full-service, forestry consulting firm operating within the forestry consulting industry. Annual sales over the past five years ranged from $3 million to $5 million, which translates into about 1.5% of the total market for all forestry consulting services in BC.
1.4 Traditional Markets

IPAC operates in BC out of offices located in Kamloops, Clearwater, Williams Lake, Chetwynd and Fort St. John. Growth has been driven by customer demands for additional manpower, new technologies and new services, and from new customers in new geographic locations. The forestry consulting operation continues to offer full-phase timber development services, primarily to major forest companies and BC Timber Sales. Other major clients include various First Nations organizations, government agencies and private individuals. Over the past year, IPAC shifted about 2% of its gross, annual sales into the mining and oil and gas sectors.

Forest licensees and government comprise the dominant market segments for the forest consulting industry. The government market segment increased following government’s launch of the “Forestry Revitalization Plan” in March 2003. The plan included a government take-back of 20% of the allowable annual cut (AAC) from the major licensees. This volume was earmarked for BC Timber Sales, First Nations, community forest licenses and woodlots. The proportion of work done for major forest licensees declined as a result of the volume take-back.

First Nations are a growing market segment. They are becoming more involved economically in the forest industry. Business to business dealings with First Nations requires core competencies in communication, innovation, coordination, adaptation and negotiation. This market segment values firms with proven abilities. Trust is a key component of all business arrangements, and larger firms tend to be less trusted. Individual relationships are valued, but a significant challenge to maintaining long-term relationship with First Nations is the frequently changing political leadership within the communities, as well as in their corporations.

Private individuals and other agencies constitute a reasonably steady market share. Contracts tend to be small and involve more specialized services. This market tends to be less attractive to larger consulting firms, but is essential for small, specialty firms.
1.5 Sales Process/Marketing

The majority of contracts are acquired through competitive bidding processes, although past references are usually required for new customers or whenever new services are offered. Marketing efforts historically focused on introducing the company and describing the suite of services offered. Spot sales rarely occur. Projects offered by customers are normally subject to an annual budgeting or tendering process. Lead times vary from days to months.

Historically, IPAC did little ‘selling’. Sales occurred as a direct result of prior relationships, or as a result of a call for tenders. Customers phoned and asked for crews at the start of the annual field season. As market conditions changed and competitor rivalry increased, it became increasingly important to solicit work in order to keep crews busy.

BC Timber Sales adheres to contract tendering rules imposed by the Ministry of Finance and Corporate Relations. Direct award contracts are restricted to values under $25,000. Contracts with BC Timber Sales are often multi-year with an option for contract renewal written in, but not guaranteed. For BC Timber Sales, multi-year contracts reduce transaction costs and eliminate uncertainty surrounding new service providers. For consultants, multi-year contracts reduce transaction costs and stabilize operations. Cost is often the most important selection criterion; however, past performance and staff competency is considered prior to contract awards. In some instances, especially for large contracts, an evaluation formula is used to give weight to non-cost considerations.

Major forest licensees generally offer one-year contracts, but long-term relationships often develop with specific consulting firms. Annual work programs are direct awarded or tendered to a very select list of consultants. Cost is always an important selection criterion, but licensees favour relationships with service providers that they know will provide good results. Relationship value usually accrues to the consulting staff dedicated to the customer. Licensees
often have biases or unique methods that consultants must adapt to. Licensees prefer to work with known people and establish relationships because it reduces transaction costs and supervision requirements. Rates and productivity are benchmarked through a tendering or budgeting process to ensure costs remain competitive.

Contracts with smaller customers and First Nations are usually awarded on the basis of reputation rather than costs, although costs are always considered. Private individuals look for dependable consultants with a reputation of providing good value. First Nations seek similar attributes, layered with cultural and community sensitivity and political considerations. Political considerations may include affiliations with other First Nations, companies or government, and relationships with community members or community leaders.

1.6 Organizational Structure and Process Design

IPAC’s organizational structure, shown in Figure 1.1, is well suited to a rapidly changing business environment. The structure can be classified as a “Responsive Adhocracy”\(^1\), but it combines elements of “Mintzberg’s Model” and “Adhocracy”. Mintzberg defines “Adhocracy” as a loose, flexible, self-renewing organic form tied together mostly through lateral means. Ambiguous authority structures, unclear objectives, and contradictory assignments of responsibility can legitimize controversies and challenge traditions. “Mintzberg Model” is a typical rational form with support systems and technostructure outside of the main operating core. IPAC is a highly opportunistic organization. Reduced structural rigidity improves flexibility and response capability. Adhocracies are suited to innovation, adaptation, growth, resource allocation, change, and creative problem solving. IPAC maintains a degree of hierarchy and division of labor to balance the need for internal control with the need for flexibility.

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\(^1\) Wagenheim, G. Organizational and Leadership Effectiveness. SFU MBA BUS 557-4 Notes: May, 2003.
Figure 1.1 Organizational Structure: A “Responsive Adhocracy”

IPAC’s service operations combine professional and mass services process types, but the design, as shown in Figure 1.2, mostly resembles a typical professional services processes described by Slack, et al.². The detailed process design for a typical consulting project shown in Figure 1.3 reveals corporate engagement at various levels, resulting in a definite team approach. Distinct teams form around various projects depending upon skills and manpower requirements.

Larger projects are segmented by functional roles so that work proceeds simultaneously in various departments.

Project managers (PM’s) provide a single point of contact with customers and interact with the finance department once a project commences. Work is organized sensibly, given the skills required for each phase. Quality assurance (QA) occurs at several points utilizing the resources closest to the task. Departments take ownership of portions of projects, but the goal is the integration of members of otherwise disparate departments into teams.

**Figure 1.2 Professional Services Process-Based Chart**

Source: Figure by author based on concepts outlined in Slack, N., et al., 2004.
Figure 1.3 Typical Process Flow for Full-Phase Forestry Projects

Source: author.
2 THE PROBLEM

The BC Ministry of Forests introduced the “Forestry Revitalization Plan” in 2003 with the intention of rejuvenating the struggling, forest products manufacturing industry. The plan included the abandonment of appurtenancy regulations that previously restricted major licensees from transferring cut between, or closing, manufacturing facilities if jobs were affected. Forest licensees responded quickly through mergers and acquisitions, log-trade agreements and plant closures. Industry concentration and restructuring was characterized by regional rationalization of manufacturing assets and timber supply. The bargaining power of major licensees increased.

The BC forestry consulting industry is a direct supplier to the forest products industry. Competitor rivalry within the forest consulting industry intensified significantly over the past five years due to an oversupply of consulting firms. The principal competitive strategy employed by forest industry manufacturers is cost-based. Margins in the forestry consulting industry are squeezed between rising costs and depressed prices. Cost-based strategies do not offer sustainable competitive advantage. Differentiation yields some competitive advantage in the forestry consulting industry, but competitors are quick to respond. Economic rents continue to erode. Macro-environmental factors such as a weakening US economy, the strengthening Canadian dollar, the US-Canada softwood lumber trade dispute, and the mountain pine beetle epidemic are negatively impacting the forestry consulting industry. The combination of intense rivalry and increased buyer power makes the outlook for the industry less attractive.

The shareholders of IPAC, both of whom are near retirement age, are considering two primary succession plans: passive ownership or the sale of the company. Prospective buyers include the employees, competitors, strategic investors looking for market access and new competencies, or financial investors interested in the leverage points available through the company. Both succession plans are predicated on having a viable business either to pass on or to
sell. However, the industry is flat, and is soon to be in decline. Low profits in 2006 and declining industry attractiveness threatens shareholder assets and ultimately impacts the ability to implement either succession plan. Corporate valuation is typically based on some version of earnings before interest, taxes, depreciation and amortization (EBITDA). High profits usually translate into higher sales values, while low profits make the company difficult to sell. It will be difficult for the owners to adopt passive investor positions and turn the company over to new management if shareholder assets are at extreme risk. Four primary business options are considered to address current shareholder assets and to facilitate succession planning; wind the business down, maintain the status quo, repositioning and "creative destruction". The first option, to wind the business down, is intended to capture the existing shareholder equity before it is lost, but this option does not satisfy any succession objectives. The second option is to maintain the current marketing strategy and hope that opportunities to arise to sustain the business. The third option is repositioning, whereby existing technologies and capabilities shift incrementally toward alternative, existing markets that offer higher margins. The fourth option is 'creative destruction', wherein the existing markets are virtually abandoned and entirely new business processes and service offerings are developed for emerging markets.

Labor is the primary input in the consulting industry, and emphasis on low costs forced IPAC to hold employee costs down. The recent economic boom, especially in BC, has resulted in increased competition for skilled labor among various industries. The attrition of skilled workers from the forestry consulting industry has been comparatively high. Workers are drawn toward industry and government, and other industrial sectors such as mining, oil and gas and construction. IPAC's response to the cost-price squeeze it has endured impaired its ability to retain and recruit workers, and impacted employee morale. Skilled and motivated human resources are mission-critical. The success of the firm depends upon its ability to retain, recruit

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and motivate employees, and to preserve knowledge and relationship capital. Corporate commitment and a supportive culture are essential. Following Senge’s systems thinking concepts, the human resources policies must support the marketing strategies to form a virtual reinforcing loop\(^4\). Strong HR-Strategy linkage will preserve succession options for the future.

**Figure 2.1 The HR-Performance Reinforcing Loop**


The problem is that forestry consulting industry is only moderately attractive, and a dynamic set of external factors influence make the industry appear even less attractive in the future. Poor financial performance and high employee turnover threaten shareholder assets and other corporate objectives, which in turn will impact the future succession plans of the two owners. Currently, IPAC is experiencing a negative reinforcing, ‘fixes-that-fail’ loop: ambiguous strategy and inappropriate HR policies drive down the quality of human resources and erode the performance of the company. It is difficult to say of the two components “which is the chicken and which is the egg”. Employee turnover and low morale create issues that distract the senior team from devoting the time necessary to develop clear strategies that will lead the company to more solid ground. There is a need to identify and implement a preferred business option and associated marketing strategies that improve the financial performance of the company.

Associated with the implementation of those strategies, supportive and actionable HR policies must be rolled out to reinforce the quality of the human resources. Aside from the short-term imperative for corporate survival, only through these actions will the owners be able to consider either succession plan in the future. Discussion of which succession plan will best satisfy the shareholders in the future is speculative, and is hereby deferred. The focus of this project is to create a framework and a platform for the company to succeed in the near-term relative to investor, customer and employee objectives.

A marketing strategy must be developed for the preferred business option, including competitive positioning, target markets and a penetration strategy that duly considers realistic alternatives. The marketing strategy must consider various strengths, weaknesses, opportunities and threats, as well as corporate fitness and readiness. Strategic goals are needed to translate corporate objectives into actions. Critical success factors and key performance indicators are required to measure progress toward the stated goals. Clear, actionable policies are needed to ensure that the mission-critical human resources are available and optimized.

Ultimately, industry attractiveness is a perspective driven largely by the relative competitiveness of each specific firm. The external factors shaping the competitive environment are generally outside any individual company’s control, but nimble firms will adapt and succeed where others will fail. Firms that are fit for the environment and ready for action will view a volatile environment as an attractive opportunity to gain market share, while firms that are locked-in via internal rigidities will view the industry as unattractive. Change barriers are a form of internal stickiness, and thus are discussed relative to the implementation of the marketing strategies and HR policies. The strategies and policies presented are intended to allow IPAC to diversify its market base. The process involves game theory. The long-term objective is to develop and continuously reevaluate strategies that create sustainable competitive advantage relative rival firms.
3 INDUSTRY ANALYSIS

3.1 Forestry Consulting Industry

The forestry consulting industry serves the much broader forest industry. Its structure is predominantly 'perfect competition', although differentiation yields some 'oligoplies'. Within BC, the major forest products manufacturing companies add value to logs taken from predominantly Crown lands. They produce and deliver an array of products to diverse markets throughout the world. Products include dimension lumber, pulp and paper, poles, plywood, oriented strand board (OSB), shakes, shingles and numerous other engineered or value-added products. Solid wood products such as lumber, plywood, OSB, shakes and shingles are distributed mostly to customers in the United States, although domestic and Asian markets are also significant. Pulp and paper is distributed to global markets.

The forestry consulting industry operates and adds value in the planning, timber development and logging and silviculture portions of the forest industry value chain shown in Figure 3.1. The industry provides a wide array of services; however, there may be considerable specialization by individual firms. Services include policy development, aerial mapping and photography, biometrics, certified wildlife and danger tree assessments, cruising and inventory services, environmental assessments, fire hazard assessments, forest management auditing, forest ecology, economics and timber valuation, forest engineering, silviculture, forest pest control, hydrology, forest management and planning, forest policy, forest products marketing, brokering, forest protection, research, training and education, geographic information systems (GIS) and global positioning systems (GPS) services, various feasibility studies, software and data services, land use and landscape level planning, log scaling, range management, road and bridge construction, timberland appraisals, woodlot management, watershed assessments, stakeholder negotiations, and other professional assessments.
Forest licensees operate on Crown land under authority provided by volume or land-based tenures. The forest industry is subject to significant licensing and regulatory controls. Many regulations pertain to forestry practices and hence affect the forestry consulting industry.

Government harvesting operations are administered by BC Timber Sales (BCTS). Individual Timber Sales are sold by sealed tender to the person that bids the highest bonus above a specified upset price. BCTS is responsible for all phases of work and stakeholder negotiations required to prepare individual Timber Sales for tender.

Minor tenure holders such as First Nations, community forests and woodlot licensees operate on short or long-term, area or volume-based tenures. Most tenures have a defined allowable annual cut (AAC), and individual cut blocks are not identified. The sum of the AAC for all tenures, including individual Timber Sales, comprises the provincial AAC. Tenure holders are responsible for inventory, planning and development, valuations, stakeholder negotiations, engineering, road construction, logging, site reclamation, tree planting and all other phases of the timber harvesting program. All work is subject to government regulation and approval. Regulatory compliance is enforced by government, as well as by professional organizations responsible for professional standards and accountability.
The AAC for BC in 2006 was approximately 80.7 million cubic metres. Major licensees account for about 74% of the annual harvest, First Nations about 4%, and government and other private sources about 22%.

3.2 Industry Overview

Significant forces are driving changes in the business environment for the forest consulting industry, including forest industry restructuring, the mountain pine beetle epidemic, a booming economy and competitor strategies. The industry is extremely sensitive to changes in forest products commodity prices.

3.2.1 Forest Industry Restructuring

The BC forest industry produces mostly commodity lumber and pulp products. On the lumber manufacturing side, the industry survives due to an unmatched ability to improve the productivity of the manufacturing process. The forest industry is undergoing significant restructuring driven by numerous mergers and acquisitions made possible under the “Forestry Revitalization Plan” introduced in March, 2003 by the BC Ministry of Forests. Regional consolidation of sawmill operations has resulted in some sawmill closures. More closures are anticipated as the forest industry continues to rationalize manufacturing assets and operations. Consolidation enhances regional buyer power for forest companies. Due to high transportation costs and high barriers to entry for sawmilling, as well as government policy regarding timber rights in BC, buyer power often reaches levels that promote regional monopsonies – a situation typified by one buyer and many sellers.

Increased timber allocations to BC Timber Sales, community forest licenses, First Nations tenures and new non-replaceable forest licenses resulted in a surplus of logs on the
market. The surplus is driven by finite manufacturing capacity. The buyer power enjoyed by forest industry manufacturers is used to squeeze suppliers. Examples of economic hold-up are common throughout the industry. "Supply chain management" in the forest industry often focuses on "right-sizing" of suppliers in order to capture economies of scale. Procurement personnel seek volume discounts. Even though many suppliers remain sub-optimized, contract prices are usually based on optimum configurations. Contract dealings often have a "take it or leave it" tone with limited real negotiation. Suppliers with high fixed costs, customer-specific assets, or those that are otherwise locked-in, are vulnerable to the economic hold-up problem.

3.2.2 Mountain Pine Beetle Epidemic

The catastrophic mountain pine beetle (*Dendroctonus ponderosae*) infestation has shifted the timing and volume of work contracted out each year. Timber development is often delayed until after the beetle flights in the fall, which significantly accentuates the seasonality of forestry consulting operations. Consulting firms are forced to find alternate work to hold onto key staff until late season contracts are offered. As a result, BCTS contracts are bid aggressively. The oversupply of logs compromises the viability of most Woodlot Licences and other private timber sources, and work in these sectors has decreased significantly.

3.2.3 Economic Environment

The booming Canadian economy has created many new opportunities for skilled workers in other industries. The price squeeze imposed by forest industry manufacturers has impaired the ability of most forest consulting companies to compete for skilled workers. The forest consulting industry has experienced a decline in the availability of skilled workers over the past two years.
Recent strengthening of the Canadian dollar exchange rate relative to the US dollar imposes significant hardship on Canadian producers. Manufacturing costs are incurred in Canadian dollars, but markets are based on US dollars. A 20 point movement in exchange rates has the effect of reducing prices by the same amount. The full effect of the exchange was partially offset by progress made in the Canada-US softwood lumber debate and a strong US housing market. That said, the recent drop in the US housing market, and the resultant drop in commodity prices, has many producers operating at or near shut down. Several BC companies recently announced temporary mill shutdowns, citing high costs and weak markets as the reason.

3.2.4 Competitor Reactions

Many forestry consulting firms failed due to excessively low prices. Price is currently the primary competitive priority in the forest industry. Standard operating procedures minimize quality as a competitive priority and as a point of differentiation. Consequently, prices have declined steadily despite increased work volume.

The marketing mix, product, price, place and promotion for most large, full-phase consulting firms has been modified to aggressively chase markets, often with increasingly lower pricing. Many firms undertook some form of market segmentation, and linked survival and growth strategies to defined segments. However, segmentation of forestry consulting markets was almost entirely based on geographic or psychographic customer characteristics. The similarity in the responses by a broad range of competitors indicated that most assumed similar degree of segment homogeneity and applied similar segmentation attributes.

3.2.4.1 Products

Individual products have not changed significantly over the past decade. Most technical functions are linked to government regulations, standards of forestry practice, tradition or
technical conventions. Service strategies by competitors moved toward two distinct forms – an expanded, bundled service offering to compete as full-phase service providers, or specialized services targeting a specific job phase, often coupled with individual skills, geographic location or professional accreditation.

The service strategies significantly impacted the marketing mix. Full-phase service providers survived based on diversification. Specialty firms typically received lower prices, but survived based on efficiency. The proportion of competitors that moved toward full-phase service offerings increased. This strategy fits corporations better than self-employed individuals. Sufficient size is required to capture scale economies, especially highly qualified or specialized professionals exist within the organization. Customers have become increasingly product-centric in heavily contested markets. Competitors compete primarily on price, but customers also routinely offload project risks, carrying costs and transaction costs. Service providers adopt these additional burdens as part of a standard service package.

3.2.4.2 Price

Prices have declined in all markets, with few exceptions. Prices for technology-driven services remain relatively stable, probably due to high research and development, marketing and fixed costs. Entry barriers restrict competitor drift into technology-driven markets. Small, specialty firms have effectively shifted customer pricing expectations for low-end phases. Low commodity prices and cost-based strategies have indirectly driven prices down. Many customers now separate specific phases out of large contracts in order to capture efficiencies. Alternatively, customers package contracts under the understanding that they will pull specific phases out of the contract prior to acceptance if pricing is not competitive for all phases. The overall effect is that margins have steadily declined. Customers are increasingly engaging this approach despite the
obvious impact that it has on their long-term suppliers. Traditional markets are becoming more product-centric, where the emphasis in the market mix is price and product.

3.2.4.3 Place

Over the past five years competitors chased markets into what were once considered remote and less appealing geographic areas. The north half of the province was poorly served by most forestry consulting firms. Sufficient work existed in the southern interior and coast areas to satisfy most firms. Remote operations imposed logistical challenges and resource commitments that distracted firms from markets in preferred geographic locations, making them more difficult to serve. Firms operating in preferred geographic areas could more easily recruit and retain good employees, which created competitive advantage. Unfortunately, specialty firms and fierce rivalry amongst larger firms that were intent on retaining key employees rapidly eroded prices in preferred locales. Margins were squeezed, so competitors chased what were typically better prices in remote markets. Staff willingly accepted these assignments because local contract options and outside job prospects were limited.

Customers in remote areas tend to be more relationship-centric than those near highly populated areas. However, faced with increased supplier options, customers are becoming more product-centric. The challenges imposed by remote operations, travel costs and staff turnover make remote markets less attractive. Customers often expect service providers to establish a local presence near buying centres. Economies of scale and staffing issues impose barriers for many consulting firms. Ongoing staffing issues forced some competitors to abandon operations in northern BC locations. The overall trend has been more reactive than proactive.

Macro-environmental factors and commodity prices impose similar competitive stresses on all manufacturing companies. Demand is derived primarily from US housing markets. Housing starts influence lumber prices, which indirectly affects demand in the forestry consulting
industry. While customers in more remote geographic areas have remained relatively relationship-centric, their expectations have become increasingly price sensitive. Opportunities for consultants to move into remote markets were short-lived. In many instances the incremental challenges outweighed incremental price gains and acceptable R.O.I. was not achieved.

Most competitors have settled into a pattern of protecting defined, traditional, geographic markets. They compete aggressively in local markets, but unpredictable results associated with remote markets discourage expansion. Increased price sensitivity impairs the ability to compete with incumbents in remote areas, unless camps are required. Larger firms grow by establishing and defending new offices in remote geographic areas. The existing full-phase service offer quickly saturates local markets and constrains horizontal or vertical expansion with new services.

3.2.4.4 Promotion

Five methods are used to communicate with customers; advertising, sales promotions, personal selling, publicity and direct marketing. Most contracts are earned through bidding processes or by word-of-mouth. Customers often advertise or post contracts to solicit tenders from qualified firms. Advertising and sales promotions have limited value. Most large, full-phase firms focus on personal selling and direct marketing, targeting existing customers in an effort to promote loyalty. Corporate reputation - publicity, is an important screening tool used by customers. Customer loyalty protects margins and markets. More successful firms focus on building their reputation. Personal selling and direct marketing are derived from customer evaluations and macro-strategy integration. Most firms do this intuitively and iteratively rather than consciously. They attempt to create a differentiation strategy based on relationship marketing. These initiatives are often in conflict with customers that are very price sensitive. Full-phase firms seek to promote relationships and preempt the product-centric shift. Marketing promotions follow three main themes: first, decreased life-cycle costs or adjustments to the cost
mix; second, increased incremental value through functional re-design; third, increased incremental value through intangibles coupled to product packages.

Small, highly specialized firms compete almost exclusively on price. They rely on personal selling and reputation, but earn customer loyalty based on sustainable price advantages. Typically, these firms lack marketing expertise and therefore rely upon technical proficiency.

3.2.5 Competitor Profile

Competitors within the forestry consulting industry operate under diverse business models, ranging from highly specialized, one or two-man operations, up to large, multi-divisional, multi-disciplinary firms offering full-phase services in several geographic locations. Larger firms often serve customers in other business sectors, such as oil and gas, mining and construction. They may also serve customers outside of BC.

IPAC's annual sales over the past five years ranged from $3 million to $5 million, implying about a 1.5% share of the BC forestry consulting market. IPAC still competes as a full-phase firm offering services in all forestry functions. Operations focus on specific geographic locations in the interior of BC, with diverse customers at each location. There are approximately 25 similarly sized, full-phase firms, serving a combined total of about 50% of the total market. Most large firms overlap to some degree, but most are geographically focused. Transportation and other costs inhibit firms from competing aggressively in areas served by local firms. The remaining 50% of the market is served by relatively small, specialized service providers. Specialization provides competitive advantage. Licensees often prefer small contractors for routine services. They are attracted to low cost options and task specialization often promotes efficiency. Licensees possess the administrative staff with which to make timely decisions and administer small contracts. In addition, in small communities, interpersonal relationships still
drive contract awards. In contrast, large consulting firms compete aggressively for large government contracts to supplement licensee contracts. A shortage of operationally experienced staff within government creates a dependency upon large, full-phase firms to provide ‘turn-key’ solutions.

3.2.6 Competitive Priorities

The forestry consulting industry supports both differentiation and low-cost strategies. Hybrid forms are common because cost is always a consideration given the market conditions. Customers will separate large contracts into various phases, and they expect competitive pricing for each phase. Consulting firms differentiate around customer characteristics (i.e. market segment attributes), especially geographic location, price sensitivity, or relationships. Competitive priorities include cost, dependability, flexibility, quality and speed. Traditional work phases, such as timber cruising, traversing and other routine functions, favour low-cost strategies; however, emerging markets are not typically associated with work of a traditional nature. Firms differentiate themselves to capture these markets. Consulting firms compete for new markets by applying professional or technological competencies. Firms add value by offering customers risk mitigation, innovation, stakeholder engagement, expedited deliverables or other unique services.

Licensees sell predominantly commodity products, and typically employ low-cost strategies. They routinely squeeze suppliers to generate cost savings. In forestry consulting, they select low cost suppliers from a list of preferred consultants. Preferred consultants offer value by being low-cost, local or dependable. Large, full-phase consultants reduce transaction costs. Consulting firms manage non-value added costs, such as transportation and living out expenses, by locating “field offices” near preferred customers. Relationships are managed in order to promote loyalty. The goodwill of relationships often accrues to key staff rather than the firm. Maintaining key staff is essential to building customer loyalty. Contracts are typically based on
hourly rates, with a licensee representative designated to provide direction and make operational decisions.

3.2.7 Size of the Forestry Consulting Industry

The forestry consulting industry has grown significantly since the late 1980's. Until that time, most forestry work was done in-house by forest licensees. At that time, consultants specialized in services like forest inventory (i.e. timber profile) or silviculture. Regulatory changes introduced in 1987 significantly increased the volume, sophistication and technical nature of work associated with timber harvesting in BC. The introduction of the Forest Practices Code of BC Act in the mid 1990's increased the workload even further. More recently though, despite an approximate 15% increase in AAC related to the mountain pine beetle epidemic, the annual volume of forestry work held steady. The only major exception is silviculture, which increased due to the planting requirement on incremental timber harvesting areas. The increased harvest was largely offset by a switch to “results-based forestry”, and larger cut blocks associated with salvage operations in pine beetle infested timber modeled after natural disturbance types.

There is no data to give scale to the forestry consulting industry directly. The size of the industry is proxied by approximating the total annual cost of forestry work, and then estimating the proportion done by forestry consultants. The provincial AAC in 2006 increased to about 80.7 million cubic metres. The typical cost of administration for timber harvesting operations, as reflected in the interior appraisal manual, is about $8/m³. Since forestry consulting incorporates most administrative functions, the implied market potential is in the order of $650 million per year. However, most administration is done in-house by licensees or government, so the forestry consulting market is much smaller. It is estimated via personal observation that less than 25% of the total forestry work is outsourced, excluding silviculture, yielding an annual market size of about $165 million. The total budget for silviculture administration constitutes an additional
$1/m^3$, or about $80$ million. The total market for other forestry-related private and government customers is estimated to be approximately 10\% of the total market, or an additional $25$ million. Total market size is therefore estimated to be about $270$ million.

3.2.8 Market Growth

The forestry consulting industry serves the forest industry. Growth in the forestry consulting industry is heavily correlated with activity in the forest industry and new government policy related to the use of Crown land. The forest industry is currently undergoing considerable change in response to key macro-determinants such as economics, politico-legal, technology and biological determinants. The Ministry of Forests' “Forestry Revitalization Plan” spurred major changes in the forestry sector. The reallocation of AAC to BCTS, First Nations and local forest-dependant communities redistributed the cut away from licensees. At the same time, the province is under siege by the mountain pine beetle epidemic. Current forecasts by the Ministry of Forests’ Research Branch indicate that the annual volume of timber killed on the timber harvesting land base will peak in 2006 at about 90 million cubic metres. By the end of 2006, as much as 40\% of the BC interior pine will have been killed or harvested. Research shows that 80\% of the pine will be dead by 2013.

The Ministry of Forests promoted the salvage and utilization of pine sawlogs by increasing the AAC in many regions of the province. Provincial AAC increased from 71.8 million m$^3$ to 80.7 million m$^3$ over the past three years. Salvage operations are forecast to slowly decline after 2010. AAC levels are forecast to drop back to pre-outbreak levels in about 2020, though it is expected that by 2017, most the dead pine will not be useable for sawlogs. The long-term impact on the AAC is not clear because there is considerable speculation as to the “shelf-life” of dead pine. New uses for dead and dry pine are still being sought. The annual area of harvest in 2006 will reach 200,000 hectares, and will slowly drop to below pre-outbreak levels by
2017. The drop to below pre-outbreak levels will offset the current over-cutting related to salvage operations.

In addition to increased harvest levels, significant dollars are currently being spent on a variety of pest surveys and mapping initiatives, increased planning and reforestation projects. The forestry consulting market has been stable since 2003. The growth in the market associated with the AAC uplifts is offset by regulatory changes that reduce the intensity of work required per unit of timber harvested. In practice, and in accordance with regulatory latitude, the intensity of work associated with mountain pine beetle salvage is much lower. Individual harvesting units are much larger compared to previous standards. The market will probably peak sometime between 2007 and 2009 because mortality is expected to peak in 2006. With the pine beetle diminishing and no additional AAC uplifts imminent, the market will slowly decline over the next decade.

The market is large and static, with a decline expected over the next decade. Accordingly, the forestry consulting industry is positioned in the mature to saturation phase of the life cycle curve. Industry growth will be limited. Competitors are expected to exit rather than enter the market, and more product-centric market mixes will dominate.

3.3 Industry Attractiveness

Porter's five forces model is used to analyze five factors generally believed to determine industry attractiveness. A sixth factor - government, influences the attractiveness of the industry with various policy and regulatory changes, but its effect is felt through the other factors. Each of the five factors is driven by a number of considerations that increase or decrease its overall influence. The combination of considerations and factors comprise the business environment. The forces alter the dynamics of the industry, and are critical to strategy decisions. The measure
of industry attractiveness does not determine the profitability of a company within it or entering it. There are profitable companies in unattractive industries, and failures in attractive ones.

Corporate sustainability is based on a company’s relative ability to create competitive advantage. Competitor rivalry is a primary determinant of industry attractiveness, but it is influenced by the relative strength of the other factors. It is possible that rivals within an industry will have different perceptions of industry attractiveness depending upon relative strengths.

Figure 3.2 Porter’s Five Forces Analysis

Supplier Power:
(+ ) Labor shortage
(+ ) Labor drain to other industries
(+ ) Increased fuel costs
(+ ) Loss of short-term vehicle leases
(+ ) Insurance requirements

Threat of Entry:
(+ ) Low fixed costs
(+ ) Low capital requirement
(+ ) Limited technology
(+ ) Preference for local suppliers
(- ) Cyclical and seasonal markets
(- ) Defensive pricing strategy
(- ) Relationships/networks

Competitor Rivalry:
(+ ) Moderate concentration
(+ ) Flat market in the short-term with decline in long-term
(+ ) Homogeneous services
(+ ) Low customer loyalty
(+ ) Specialization
(+ ) Low fixed costs
(- ) Low exit costs

Threat of Substitutes:
(+ ) In-house work
(+ ) First Nations capacity building
(+ ) Government staff increases
(- ) Seasonal and cyclical work

Buyer Power:
(+ ) Increased concentration
(+ ) Regional monopolies
(+ ) Oversupply of suppliers
(+ ) Homogeneous services
(- ) Supplier differentiation
(- ) Fixed or remote job sites
(- ) Moderate switching costs
(- ) Client-specific knowledge

Government:
(+ ) Policy changes
(+ ) Professional accountability
(+ ) Results-based practices

(+) = increases impact on competitive environment
(-) = decreasing impact on competitive environment

Currently, the forest consulting industry is only moderately attractive to IPAC, despite increased market potential associated with AAC uplifts in the BC interior. Consultants are squeezed between suppliers and buyers, both with increased bargaining power. Key suppliers include labor, fuel suppliers and insurance companies, all of whom have higher relative bargaining power than in the past. On the buyer side, global commodity prices reinforce low-cost strategies and forest industry restructuring increased regional buyer power.

Given the status quo business option, the forestry consulting industry will become less attractive over the next decade. Business will remain steady in the short-term for existing firms, but low barriers to entry and low exit costs limit up-side potential. The bargaining power of labor will increase as baby boomers exit the job market and competition for recruits intensifies. Decreased timber harvesting levels will exacerbate the current over-supply of forestry consulting firms. A waning forest industry, linked to a post-beetle shortage of timber supply in most regions, will intensify competition in the forest products industry and force buyers to cut costs even further. Competitor rivalry will increase and margins can be expected to erode as the forestry consulting industry matures.

3.3.1 Competitor Rivalry

Competitor rivalry in the forestry consulting industry is high, and is increasing due to small-scale operators offering discount prices. Customers are moving cost-based strategies and product-centric mentalities as global markets for commodity forest products tighten. Large, full-phase firms promote differentiation strategies and seek relationship-centric customers in specific geographic locations. The economies of scale decrease fixed costs and help retain key staff.

Competitive concentration is moderate, but increasing. The total market share occupied by any one competitor is probably less than 6 or 7%, with approximately 20 similarly sized
competitors comprising about 70% of the total market. The total number of consultants is unknown, but the market is likely served by several hundred, mostly small-scale, consultants.

The market is flat, with a decline expected over the next decade. Large firms with higher exit barriers will compete for market share.

Most forestry services are homogeneous. Standard operating procedures (SOP's) or government regulations dictate field practices. Professional standards and accountability also promote homogeneity. This trend is expected to continue.

Customer loyalty is low. Licensees and government are driven to reduce costs. Government is bound by contract tendering rules that ensure equal access to contracts for qualified contractors. This trend increases rivalry because customers are willing to switch service providers.

Specialization increases rivalry through improved efficiency. Small, specialized firms drive customer expectations that are difficult for large, multi-phase firms to meet.

Forestry consulting firms have low fixed costs. Larger firms typically have office facilities located in low cost, rural, communities. Capital requirements are low, and low fixed costs make it possible for firms to downsize during weak markets to maintain scale economies.

Exit barriers are generally low, especially for small firms. Firms quickly alter the scope and scale of operations without huge penalties. A general lack of customer loyalty eases re-entry.
3.3.2 Threat of Entry

Barriers to entry are generally low, so lucrative contract niches are quickly exploited by either incumbents or new entrants. The threat of entry is moderated only by the existing oversupply of firms and typically low economic rents.

Forestry consulting firms have low fixed costs. The minimum efficient scale (M.E.S.) for a specialized forestry consulting firm can be as small as one person with a vehicle. Small firms have very low administrative costs. Administration costs increase as firm size increases. In addition, bricks and mortar facilities are required as firm size increases in order to expedite and manage projects and departments. Customer expectations also increase in relation to professional image. Optimum size configurations exist that minimize fixed costs, but scale economies are not significant due to the low fixed cost nature of the consulting industry. The threat of entry is high because firms can enter the market easily.

Forestry consulting operations generally have low capital requirements. The equipment used in the consulting industry is not highly specialized, is inexpensive and is readily available, thus contributing to low M.E.S. and minimal scale economies. No changes are anticipated as firms are not prepared to make huge capital investments in an industry that is expected to decline over the next decade.

The technology deployed in the forestry consulting industry is not highly specialized. Most of it is readily transferable to other allied industries. Technologies such as GIS and GPS are widely used in other industries. Niches that require specialized technology are limited in scale. Specialized technology is usually offered by firms that differentiate around that specific technology, but typically, market share is limited. As with other capital investments, firms are not prepared to make huge capital investments in new technologies in a declining industry.
The market encourages a variety of business models. Some customers prefer working with small firms while others prefer working with large firms. Customer preferences impair an incumbent's ability to defend broad markets. New firms move into vacant niches because there are no restrictive licensing requirements to impede entry. As the industry declines, rivalry for satisfactory niches will increase and businesses will adopt suitable structures.

Customers favour local contractors. This imposes a barrier to entry for some firms, especially in small communities. Geographic location is a point of differentiation, but to be effective, service offerings must be competitive with non-local firms.

The cyclic and seasonal nature of field work imposes barriers to entry. New firms cannot gain sufficient market share during slow periods to attract competitive workers or to maintain efficiencies. Firms will exit the market on downturns, and may be slow to enter if an up-cycle is expected to be short-lived.

Access to new markets is limited due to defensive pricing strategies by incumbents. New entrants often must endure prolonged and repeated bouts of price retaliation if they attempt to enter existing markets.

Branding and network relationships are often required to break into markets. Relationships between existing consulting firms and customers create barriers to entry for new firms. Existing firms with good reputations have a significant advantage because customers lack the motivation or budgets to experiment with entrants.
3.3.3 Buyer Power

Buyer power is moderately high due to increasing buyer concentration and the establishment of regional monopsonies. The current oversupply of forestry consulting firms strengthens buyer power.

Forest industry restructuring via corporate mergers and acquisitions has increased buyer concentration and the resultant bargaining power. Regional monopsonies developed to promote operational efficiency and throughput at existing manufacturing plants. Transportation and log supply considerations, among other factors, drove licensees toward regionalization. Regional monopsonies increased buyer power due to localized supplier dependencies.

An oversupply of forestry consultants softened the market. Price competition and price retaliation are the norm in competitive markets.

Homogeneous services facilitate competitive bidding. Standardized operating procedures promote service homogeneity, as do professional standards and codes. Customers often separate large projects into phases, with routine service phases tendered individually to capture efficiencies associated with task specialization. Smaller firms move to specialized service niches, and develop efficiencies that yield competitive advantage relative to full-service firms. The propensity of customers to break projects into phases is limited by transaction costs and the availability of internal staff, as well as competitive consulting firms.

Differentiation strategies tied to specialization, geographic location, risk mitigation and transaction cost efficiencies increase the bargaining power of sellers. Consulting firms look for differentiation opportunities to offset buyer power.
Fixed job sites and remote operations reduce buyer power because buyers depend upon suppliers to come to the job site. High mobilization and demobilization impediments shift power to suppliers. Buyers provide remote camps to neutralize travel implications.

Switching costs are often higher after project start-up. Once a contract has been awarded and works have begun, it is difficult and time consuming for buyers to switch suppliers. Time delays often become more important than costs at some point, especially on projects that are already time constrained or that have windows for completion.

Client-specific knowledge is often a critical success factor. Incumbent firms possess client-specific knowledge related to processes, standards and job sites. The information adds value to service offerings, which shifts power to suppliers.

3.3.4 Supplier Power

Supplier power is high, mainly due to a growing shortage of skilled labour. The shortage is forecast to increase as baby boomers leave the work force. In addition, young workers are increasingly drawn to higher paying jobs in other industries.

Retention and recruitment of workers is rapidly becoming a major concern for all industries in Canada. The baby boomers are approaching retirement age, and there are not enough new workers to fill vacant positions. In addition, oil and gas and mining sectors, and government, have drawn many skilled workers out of the forestry consulting industry. The bargaining power of workers with suitable experience, professional accreditation or other job-related skills has increased substantially over the past two years. Skills such as communication, organization, scheduling, budgeting and project management are readily transferable to other industries. Young people are drawn to higher paying jobs in other sectors, making recruitment of
workers very challenging. The cyclic and seasonal nature of forestry consulting reduces the attractiveness of the industry to workers.

Relatively high fuel inflation compared to other, non-labour inputs has increased fuel costs as a proportion of total costs. Fuel rates are not negotiable, unlike some other supplies, thus the weighted average power of suppliers has increased.

Vehicle lease costs have risen approximately 20% over the past two years despite only modest increases in retail prices for most trucks. Until recently, many dealerships offered short-term leases to produce a steady supply of low-mileage, clean trucks that they subsequently brokered into US markets. The strengthening Canadian dollar eroded the US market for trucks and the short-term lease option disappeared. Fleet costs rose. Dealerships are less negotiable on lease terms as a direct result of the loss of the US market.

Insurance premiums have risen dramatically over the past 4 years, including for general liability, forest fire fighting (for forest companies), vehicle and professional errors and omissions coverage. The adoption of "results-based forestry" emphasized professional accountability. The Association of BC Forest Professionals enacted new, more strict disciplinary procedures. In addition, government introduced a series of new administrative penalties for administrative non-compliance. In addition, insurance rates for general liability and forest fire fighting have risen significantly due to the increased frequency of natural disasters, including the fire season experienced in BC in 2003. Insurance requirements are usually specified in contracts. Industry consolidation and bundling of services has increased the power of insurance suppliers.

3.3.5 Threat of Substitution

Threat of substitution is moderate, but it is unclear how customers will respond as harvest levels decline and skilled workers move out of the forest industry.
There is a moderate threat that some large customers will move work in-house rather than outsource. Over the past ten years, most major licensees outsourced a wide range of work that was once done in-house, driven mainly by the knowledge that lean organizations have a competitive advantage during economic down cycles. The cyclic nature of the forest industry favours lean organizations; however, recent consolidations and mergers left many companies with surplus staff. In the short-term, the licensees have carried high staff levels, often rationalized against increased harvesting levels. Organizations operating in remote locations often favour doing work in-house. Moreover, some companies identified staff retention and recruitment as a major concern for their business. These otherwise potential customers may opt to maintain staff levels to offset the threat. Predicted labour shortages support the strategy of retaining key staff rather than outsourcing, at least until harvest levels drop following the pine beetle outbreak.

Over the long-term, First Nations’ capacity building will reduce dependence upon consulting firms. Most First Nations contracts include capacity building and training commitments, with the express intention of helping members develop skills and take up key positions over time. However, the market impact is softened by the fact that capacity building will not likely keep pace with the growth in First Nations projects over the next decade.

The seasonal and cyclic nature of the forestry consulting industry decreases the threat that licensees will internalize jobs. Low cost strategies preclude carrying staff during prolonged down cycles. High labour costs reduce shutdown thresholds, but prolong shutdowns once they occur.

Increased staffing in government organizations reduces the volume of work done by consultants. The Ministry of Forests has struggled recently to increase staff levels. Many of the workers lost in the forestry consulting sector moved into government positions. However, cost or logistical considerations restrict moving highly specialized or cyclical projects in-house.
3.4 Government

The effect that government has had on the forest industry, and in turn on the forestry consulting industry over the past four years has been huge. Although the effect is often felt through the dominant five forces, the influence of government acting alone has probably been the dominant factor. The introduction of the “Forestry Revitalization Plan” led to major forest industry restructuring that shifted bargaining power toward the major licensees (i.e. buyers). In addition, the volume take-backs shifted the proportion of sales in the forestry consulting industry from the forest companies to government, and more recently, toward First Nations. The lack of loyalty displayed by government customers relative to licensee customers has increased competitor rivalry. However, in the long-term, the slackened cut control provisions presented in the “Forestry Revitalization Plan” may create opportunities for business to business relationships centred on new management paradigms and human resource needs.

3.5 Summary

The forest consulting industry is large, and though it will remain stable in the short-term, it will decrease in size as the AAC level declines over the next decade. Rivalry is intense. Competitors seek niches within the market that offer differentiation and sustainability. Customer loyalty is low, and overall, the forestry consulting industry is subject to a variety of indirect, macro-environmental determinants that have substantially impacted the attractiveness of the industry since 2003. Government policies have had a major impact on the industry by shifting the relative bargaining power of buyers and the composition of the market. Based on the current cost-price squeeze and sector dependencies, IPAC views the industry in 2006 as only moderately attractive, with reduced attractiveness in the future.
4 INTERNAL ANALYSIS

4.1 Resources Analysis

PAC offers diverse services and products, and its processes and operations are generally well configured to efficiently dispatch those offerings. In the short-term, adding entirely new services and/or products will detract from the availability of resources with which to satisfy current markets. However, only through the ability to launch new products, create more value for customers, and improve operating efficiencies continually can a company penetrate new markets and increase revenues and margins. PAC must allocate resources in a manner that balances short-term service imperatives with long-term marketing strategies.

Reengineering initiatives usually consist of six steps: 1) selecting the processes for reengineering, 2) identifying change enablers, 3) developing a business vision and process objectives, 4) understanding and measuring existing processes, 5) designing and prototyping new processes and 6) implementing new processes.

4.1.1 Human Resources

People are the most constrained resource at the present time. Over the past two years, PAC lost 7 of 9 project managers, each with an average of about 7 years seniority. These people were drawn away by higher wages, promotion prospects or the perception of increased job security. In addition, a number of full-time junior staff also left. High turnover is expected among junior ranks, but the loss of senior people decreases organizational depth. Turnover has impacted the morale and perceptions of some of the remaining employees, adding to the likelihood of additional losses. Some comfort is derived from the knowledge that the key people did not defect to competitors – instead, they left the consulting industry. Aside from the obvious costs associated with replacing these people, the loss of depth and decreased morale affects
productivity and attitudes throughout the organization. As discussed in Section 2, high quality human resources are pivotal in the implementation and development of strategies, which will in turn affect the performance of the company. Marketing strategies will be compromised unless morale is boosted and new recruits are hired. In the long-run, poor quality human resources will impact market scanning and the quality of intelligence gathered. Scanning is an ongoing process that will guide company evolution. Good people are essential, and the knowledge and information they possess can create competitive advantage. They are the most essential organizational element involved in the transformation process. People and teams provide the intellectual capital that transform inputs into outputs. Also, it is through its people that the company connects to customers, so relationship capital resides in the people.

Internal promotions and mentoring filled immediate gaps, but new hiring and job-specific training is required to add depth to the organization. Additional training will be required to shift the services portfolio into other industries. New technologies and safety requirements must be adopted and mastered prior to competing in new markets. Overall, the quality of the human resources within IPAC remains high relative to many rivals. The exodus is affecting all firms. On a positive note, turnover has created new advancement opportunities for employees in what had otherwise become fairly stagnant. Exceptional employee retention over the preceding decade left many employees feeling as though they had little opportunity for personal development.

4.1.2 Assets

Sufficient assets exist to deliver the current services suite to existing customers. New markets do not necessarily entail incremental investments, but growth into new markets will. The transition will be less onerous in the short-term if options are sought to deploy the current assets into new, more lucrative markets. Doing so will involve withdrawal from less viable existing markets. New assets financed with short-term leases will reduce risk and exit barriers. The
current equipment complement is highly adaptable to alternative markets. The lack of highly specialized equipment promotes corporate flexibility. Until succession plans are confirmed, it is best to avoid capital lock-in, especially in highly specialized equipment.

4.1.3 Administration

Successful change initiatives require internal change enablers. The key change enablers within IPaC include the owners and senior managers. These persons recognize the need to understand and support the investments required to reengineer the company. The owners are committed to the initiative as a means of preserving existing shareholder assets and as an essential step toward future succession planning.

Just as elsewhere in the organization, new skills must be mastered at the senior levels to help drive this change initiative. The company must evolve as a marketing entity, and the senior levels will provide leadership and guidance toward this end. Communication with customers will provide insight into how the current resources of the company can most effectively and efficiently be deployed into new markets. Moreover, marketing will identify niche opportunities that support new capital investments and budgets.

4.1.4 Financial Resources

Sufficient financial resources exist to make modest investments in incremental growth. Waning financial performance over the past year has compromised the resilience of the company. Although cash flow remained positive, profit declined substantially from 2004 and 2005 levels. Thus there is less free cash available for reinvestment. Current financial options are constrained by the principals’ desire to avoid debt. Operations are either equity financed or self-financed through operations. Relatively low margins that are currently typical in the forestry consulting
industry make highly leveraged firms vulnerable. In order to maintain a conservative but strong financial platform, significant new business initiatives must continue to be self-funded.

4.2 Core Competence

A core competency is a unique capability that generates competitive advantage.

4.2.1 Original Core Competency

Initially, the company’s core competency was the ability to muster large crews and expedite large multi-phase projects efficiently and effectively. But competitors eventually acquired similar capabilities, and margins eroded. What was once a core competency is now only an enabling capability. IPAC still competes on the basis of offering full-phase capability, but doing so adds very little competitive advantage. In most instances, contracts are held out for similarly qualified contractors to bid on. The residual aspect of the original core competency is that IPAC provides most services with in-house staff, including engineering and other professional and technical disciplines. This gives the company a high degree of control over projects, increases sales, adds diversity and allows margins to be captured in various job phases. Profitability may be lower due to the effect of lower margin, commoditized, job phases, but net profit is higher due to increased sales volume. IPAC responded to the general loss of competitive advantage by shifting into new markets and refining services that exploit core competencies.

4.2.2 Project Management

New market opportunities were created by Forest Renewal BC (FRBC). These projects, many of which are now done under the Forest Investment Account (FIA), require specialized expertise, technologies and processes. There were relatively few competitors when FRBC was
initiated. A core competency emerged leveraging a unique ability to manage highly specialized projects with multi-disciplinary teams comprised of internal and external participants. Network relationships added value, improved project management processes and supported in-house expertise in new disciplines such as information technologies, GIS, computer applications programming, geotechnical assessment, engineering and hydrology. The core competency became *project management*, including scheduling, budgeting and managing multi-disciplinary tasks. Project management, with the support of internally designed information technology and trained staff, especially in engineering, creates competitive advantage.

### 4.2.3 Sensitivity Toward First Nations

The expanded role of First Nations in resource industries created new opportunities. IPAC aligned itself very early with preferred customers in this segment. An additional core capability was developed combining *professional competency and sensitivity toward First Nations issues*- cultural, political, educational, social and financial. The goal is to overcome internal and external barriers, and to bring First Nations into the mainstream economy via viable, necessary and community sensitive projects. Project management, communication, relationship and business/financial acumen are asserted to capitalize on opportunities in a variety of industries. Over the past five years one of the principals took the position of President and director of a corporation owned by a First Nations community in northeast BC. Capacity to work effectively with First Nations creates an asset which is difficult for competitors to match and therefore continue to provide competitive advantage within a small but growing market segment.

### 4.2.4 Log Brokerage and Marketing Service

IPAC possesses a core competency in *maintaining log brokerage and log marketing services*. The ability to consistently earn superior returns for sellers or to access properly
manufactured logs for buyers has allowed this competency to endure. The niche is highly sensitive to reputation and relationships. Credibility with both buyers and sellers is essential. In addition, this sector requires good knowledge of buyer needs, as well as the elements that drive log value. Logs are generally manufactured to buyer specifications, not speculation, with low tolerance for manufacturing errors. The competency of the logging crew is critical. High value logs must be handled carefully and manufactured correctly or significant value is lost. The key component of a successful log sales program is a quality supply side. IPAC has established long-term relationships and exceptional loyalty with a number of very qualified loggers.

4.2.5 Finance Support

Another key element of the log brokerage and marketing service is the speed and accuracy of any associated paperwork. Significant liabilities are created for all parties if the transaction is not properly documented in any way. IPAC has a core competency in its ability to document and process log sales information and payments through its finance department.

4.3 Analysis of Financial Performance

The financial performance of the company since 2001 has been highly variable, reflecting the volatile nature of the forestry consulting industry and IPAC’s opportunistic approach to it. A huge sales spike occurred in 2004 and 2005 as a direct result of salvage operations stemming from the 2003 wildfires that occurred in the Kamloops area. Most of the work was undertaken on behalf of local First Nations corporations. IPAC assisted the First Nations to negotiate tenure opportunities with government, and to plan, develop, harvest and market the burnt timber. The logs had a short shelf-life, so the work was compressed into a relatively short time period. Sales dropped significantly in 2006 as fire salvage operations wound down. The sales decline in 2006 was exacerbated by local forest industry restructuring, and by constraints imposed by ongoing
mountain pine beetle activity. A higher proportion of work was done with government in late 2005 and into 2006, and contract prices tended to be lower. The shift to government contracts and away from First Nations was the result of an internal need to stabilize revenues in order to retain key staff. The First Nations projects wound down.

4.3.1 Financial Summary

The profitability of IPAC’s forestry consulting operations ranged from a low of 3.7% up to 12.5% between 2001 and 2005, inclusive; however, 2006 is forecast to be less than 1%.

Table 4.1 Key Financial Highlights of the Past Six Years

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consulting Sales</td>
<td>$3,600,000</td>
<td>$3,127,636</td>
<td>$3,286,458</td>
<td>$4,034,911</td>
<td>$4,838,982</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Net Consulting</td>
<td>$371,727</td>
<td>$211,423</td>
<td>$120,700</td>
<td>$503,307</td>
<td>$396,693</td>
<td>$21,000</td>
</tr>
<tr>
<td>Profitability %</td>
<td>10.3%</td>
<td>6.8%</td>
<td>3.7%</td>
<td>12.5%</td>
<td>8.2%</td>
<td>0.5%</td>
</tr>
<tr>
<td>NOPAT</td>
<td>$477,643</td>
<td>$352,913</td>
<td>$285,526</td>
<td>$668,167</td>
<td>$564,895</td>
<td>$189,000</td>
</tr>
<tr>
<td>Invested Capital</td>
<td>$591,477</td>
<td>$775,974</td>
<td>$919,067</td>
<td>$924,965</td>
<td>$1,015,477</td>
<td>$1,043,987</td>
</tr>
<tr>
<td>Capital Charge</td>
<td>$70,977</td>
<td>$93,117</td>
<td>$110,288</td>
<td>$110,996</td>
<td>$121,857</td>
<td>$125,278</td>
</tr>
<tr>
<td>EVA®</td>
<td>68.8%</td>
<td>33.5%</td>
<td>19.1%</td>
<td>60.2%</td>
<td>43.6%</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

* forecast ‘base case’

4.3.2 Gross Sales

Gross sales fluctuated considerably since 2001. Sales growth does not reflect the commitment of resources. The number of persons employed has grown from about 55 people in 2001 to about 75 people in 2006. Growth in total sales has lagged due to significant price reductions over the same period. The average, fully-loaded price received for a crew of two technicians declined from about $800/day in 1993 to less than $600/day in 2006.
The sales increase in 2004 and 2005 was related to wildfire salvage operations that spanned both years. The decline in 2006 was due to the completion of wildfire salvage operations. Gross sales in 2006 are forecasted to return to levels experienced in 2003.

4.3.3 Highlights

Every year prior to 2006 produced very healthy profits, as shown in Table 4.1. The shareholders set the cost of equity at 12% to reflect alternative investment opportunities. Economic value added (EVA®) has been attractive, but the 2006 results show a high degree of vulnerability. The likelihood of achieving sustainable EVA® given the status quo marketing mix is questionable. The low earnings forecasted for 2006 are based on year-to-date performance. The sensitivity of the operations to fluctuations in costs makes the status quo option very risky as discussed later in Section 7.

The pyramid of ratios framework in Figure 4.1 highlights some financial performance indicators for PAC from 2001 to 2006, inclusive. This pyramid investigates the Return on Net Assets (RONA) (i.e. earnings before interest and taxes (EBIT)/Net Assets) levers; specifically EBIT Margin (EBIT/Sales) and Net Asset Turnover (Sales/Net Assets). RONA is the product of EBIT Margin and Net Asset Turnover. Capital Asset Turnover (Sales/Capital Assets) indicates how hard the fixed assets (i.e. property, plant and equipment) worked. The changes in Cash Days, Trade Receivable Days and Payable Days effect the changes in working capital turnover.

RONA remained constant with the biggest year-over-year change occurring as a drop from 24.3% in 2005 to 14.9% in 2006. The increase in Net Assets Turnover in 2006 was offset by a drop in EBIT Margin. Net Assets Turnover improved by almost 10% due to a reduction in working capital dollars and the proportion held in Accounts Receivable relative to 2005.
Table 4.2 provides a detailed summary of working capital composition for the six-year period from 2001 to 2006. The huge increase in working capital in 2004 was related to the fire-salvage sales spike. Trade Receivable Days was steady from 2003 to 2004, but Accounts Payable and Cash rose sharply in 2004 relative to 2003. Inventory and Work in Progress were relatively constant over the entire period.

Figure 4.1 Pyramid of Ratios Framework

![Pyramid of Ratios Framework](image)

Table 4.2 Working Capital Composition

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>7.8%</td>
<td>36.8%</td>
<td>(9.9%)</td>
<td>23.0%</td>
<td>(5.8%)</td>
<td>2.8%</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>65.6%</td>
<td>32.5%</td>
<td>83.3%</td>
<td>46.7%</td>
<td>86.7%</td>
<td>74.1%</td>
</tr>
<tr>
<td>Inventory and Work in Progress</td>
<td>8.9%</td>
<td>6.1%</td>
<td>10.3%</td>
<td>3.3%</td>
<td>7.6%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>17.7%</td>
<td>24.6%</td>
<td>16.2%</td>
<td>26.9%</td>
<td>11.5%</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

Table 4.2 Working Capital Composition


Working capital turnover changed considerably, as did the amount of working capital. Working capital peaked in 2004 at about $1.8 million. Although Accounts Receivable declined as a proportion of working capital, it had risen in absolute dollars to almost $0.9 million.
Working capital decreased in 2005, and again in 2006, reflecting lower sales. The composition of
the working capital changed substantially over the six-year period, especially Cash and Accounts
Receivable. The biggest concern was the Cash deficit in 2003 and 2005. The company extended
Trade Payable Days during these periods due to a shortage of cash. In addition, the company had
a source of cash available via its log brokerage department. The log brokerage department is not
included in these financial figures. Thus, the pressure of the negative cash position was not felt.

4.3.4 Service Portfolio

The suite of services offered has not varied significantly for the past six years. The
company recognized softening markets in 2001. Weak commodity prices and other macro-
environmental determinants were clear. The BC government responded with their revitalization
plan, and market place challenges increased. Rivalry stripped margins. In response, the company
undertook to diversify into markets in more remote geographic locations in northern BC, as well
as in non-forestry industrial and commercial sectors. A new commercial division was formed
under the name of Integrated Digital to pursue non-forestry customers, but with limited success.

IPAC increased its role in First Nations markets when it was engaged in 2001 by a Treaty
#8 First Nations group in northeast BC. The relationship grew on the basis of added value and
commitment. This relationship has generated significant exposure and many new network
opportunities. Key linkages to the mining and oil and gas industries were achieved. At the same
time, IPAC increased its exposure to First Nations groups in the Kamloops area. The objective
was to pursue market segments that valued non-cost service priorities, and that offered future
growth potential.

In 2004, the benefit of long-term relationships with First Nations crystallized. The sales
spike in 2004 and 2005 was the result of a mutually valued, seven-year relationship. Other First
Nations relationships yielded benefits with new opportunities in the mining and oil and gas sectors. These engineering contracts were subcontracted under First Nations business ventures.

The sales spike in 2004 and 2005 was anomalous, but continues to yield increased opportunities, especially in silviculture. The overall innovation strategy focused on modifying existing services to match markets in new geographic locations, and in alternative industries. Sales growth was largely the result of expanding operations within existing service groups to match customer demand. The process of moving into alternative industries commenced in 2001 when obvious macro-environmental factors and increased rivalry drove profits down. No major service modifications occurred until just recently. Increased business consulting and legal surveying constitute major modifications. The business consulting service is primarily related to assisting First Nations with economic and business development opportunities.

4.4 Positioning/Competitive Priorities

The company's initial value proposition emphasized speed (i.e. short lead times), quality, flexibility and dependability, as shown in Figure 4.1. Initially, cost was less significant. Constant regulatory changes by government delayed timber harvesting approvals. Major forest licensees were unable to keep timber development in pace with harvesting operations, and standing timber inventory (STI) dropped so low that their manufacturing and sales plans were impacted. Building STI became a priority. Manufacturing companies with STI enjoyed marketing advantages.

IPAC's differentiation strategy in 1992 focused on product quality and service flexibility. Customers recognized that quality influenced the flow of timber harvesting approvals and their credibility with government. Good quality was valued, largely because it helped eliminate the need to rework areas. Reworks imposed time delays and added costs that were not tolerated. Timely deliverables were important to ongoing operations. Manufacturing priorities drove timber
development priorities. When STI slipped too low, manufacturing options were lost. Forestry consulting firms had to remain flexible in both capacity and scheduling in order to respond to changes in direction from customers. Large, multi-disciplinary consulting firms possessed spare capacity and often received incremental assignments with preferred rates. Quality work and flexibility created competitive advantage. The core competency was providing a skilled, multi-disciplinary work force capable of expediting large full-phase timber development projects.

IPAC pioneered forestry applications for GPS technology, digital mapping and GIS database development.

![Figure 4.1 Polar Diagram Showing Change in Competitive Priorities](image)

Source: author, based on concepts presented by McCarthy, I., October 2005.

The positioning strategy has changed since 1992. STI is no longer in short supply with most major producers. Pine beetle salvage operations exacerbate the seasonality of forestry projects. The work window has tightened, and spare capacity is now too much of a liability for consulting firms to carry. The emphasis on prices imposes constraints on any firm's ability to carry idle staff. The environment has become increasingly legal and litigious. Contracts carry stiff performance clauses and financial penalties. It is difficult to assign staff to a contract and then have them available for others. The reallocation of capacity in any given contract will meet with customer objections. Forestry consultants are obligated to assign particular staff to
contracts, and have limited flexibility to adjust assignments. Quality is now guided by standard operating procedures, standards of professional practice, and other technical conventions. Registered professionals assume errors and omissions liability upon signing and sealing documents. The lead time available in contracts has reduced the time pressure. Deadlines have always been critical, but now the ability to deliver on time is a function of dependability and flexibility, not speed. The dominant competitive priority across broad markets is cost. The highly competitive nature of commodity-based forest products markets drives this priority.

4.5 Branding

Branding efforts emphasize quality, dependability and speed. Our original sales slogan referred to “Guaranteed Quality Services”, stemming from the company’s start with Tolko and the need for quality assurance within the value proposition. This was abandoned in along with the change of the company name in early 2006. It was increasingly obvious that customers did not value quality as a stand-alone competitive priority. The name change retained the “Integrated” portion of the old name, and substituted “ProAction Corp” for “Woods Services Ltd”. The new sales slogan includes the phrase “Service Excellence, Exceptional Results”. The new slogan connotes professionalism, customer service and optimized results. The “Integrated” portion of the name was retained to maintain goodwill with established customers that had come to refer to the firm in short-form as Integrated. The new slogan and name are consistent with the corporate competencies, and the overall marketing strategy and competitive priorities. Ultimately, the refined marketing mix, with an emphasis on place, product and promotion, will be served by the latitude afforded by the new name and slogan. The reputation and history of the company as an entity that can “get the job done” will strengthen the branding effort.
4.6 Historical Marketing Efforts

Historically, selling was not necessary in order to conduct business. Customers preferred long-term relationships with consulting firms that provided good service and fair rates. Customers would phone suppliers to line up crews, and projects were, for the most part, ongoing throughout the year. Marketing was limited to the introduction of new or innovative services. IPAC resisted the temptation to grow uncontrollably in response to customer requests, mostly due to a desire to avoid dependencies. In contrast, many competitors grew very rapidly, but suffered significant declines when the business environment weakened in 2001.

During the past five years, it has become increasingly necessary to secure contracts due to increased competitor rivalry and increased buyer power. Firms that excel at marketing consistently gain competitive advantage. Large firms rely on relationships marketing to secure traditional market share and to identify diversification potential. The absence of intelligence or feedback makes it difficult to modify products to penetrate other markets. Successful horizontal and vertical integration strategies are rooted in marketing. Marketing also lessens the risk of dependency and increases overall primacy and effectiveness.

4.7 Strengths and Weaknesses

4.7.1 Strengths

IPAC has several strengths that create competitive advantage and corporate resilience. The company adapted well to rapidly changing environments in the past; however, the complexity and sensitivity of the macro-determinants imposed on the leading customers now is re-shaping the industry at an accelerated pace. IPAC is a relatively innovative forestry consulting company, but the current and anticipated environments require more than the modest adjustments that have worked in the past. The strengths will provide the ingredients to meet the demands.
Organizational Structure: The organizational structure imparts tremendous flexibility. The organizational structure is relatively devoid of hierarchical stickiness. Amorphous team approaches are highly adaptable to customer demands and technical challenges. The structure is well suited to relationship marketing. Customers are increasingly less likely to accept mere repackaging of standardized offerings. True relationship marketing will match unique customer needs to fully customized offerings.

Corporate Brand: The corporate name change implemented in 2006 creates an advantage relative to other forestry consulting firms attempting a marketing campaign in alternative industries. The new company name has broad spectrum utility. The effect of stereotyping cannot be underestimated.

Service Portfolio: IPAC offers a broad suite of services with exceptional capabilities in engineering, digital technologies, business management, First Nations relationships, project management and log brokerage. While there are a number of competitors specializing in these fields, there are none that offer that combination of services. Engineering is seen as a universal point of entry in alternative industries. Moreover, the combination of skills creates a unique value proposition with a high degree of utility in resource-based industries where planned development infringes on aboriginal rights. The buyer mix is appropriately matched to the organization and the marketing strategy. The firm’s customer base was driven by a proactive versus reactive strategy. Services expanded both horizontally and vertically in response to specific customers and micro-segments in the industry. The degree of diversification optimizes risk and promotes efficiencies.

Geographic Location: The distribution of IPAC’s operations promotes competitive advantage in a number of geographic locations, including the Thompson-Okanagon, the south Cariboo and the Peace regions. The huge increase in resource-based development in the Peace
region in northeast BC, including mining and oil and gas developments, makes this region highly
desirable for growth. The office locations in Chetwynd and Fort St. John are well situated, with
few major competitors.

Preferred Head Office Location: The Kamloops office location attracts workers based on
lifestyle choices. Lifestyle considerations still provide benefits in terms of retaining and
recruiting workers. In some instances, this has also led to cost advantages relative to leading
competitors in less desirable locations. Due to digital technologies, the actual employment
location strengthens rather than weakens the 4P marketing mix. The size and diversity of the
company offers opportunity for staff advancement and training which are essential to any long-
term HR strategy. The diverse office locations and service offerings can be used to boost the
reputation of the company as an “employer of choice”.

Key Relationships: The ongoing presence of the company in some remote geographic
locations, and operating history of almost 15 years has netted the company a large number of
strong relationships. A number of key relationships exist within government, First Nations, the
forest industry and even amongst competitors. The company enjoys a high credibility and a good
reputation. More recently, the company fostered network relationships with many small firms
specializing in various job phases. This was done in order to tap into efficiencies offered by those
firms, and to bring them into the full-phase value proposition. Relationship capital, especially
with First Nations is very high.

Quality Staff: Despite turnover of 7 of 9 key project managers, IPAC continues to have
relatively highly skilled staff. Historically, retention was very high and the company had
enormous depth. Recent attrition was most prevalent in the middle management layer, which
allowed some ‘juniors’ to advance. In reality, the juniors were ready for advancement, but no
positions were available. Overall, the promotions and resultant pay increases have been motivational. Organizational depth has been lost, but not stripped.

**Diversification:** IPAC has experience with a wide range of customers in diverse markets. Customer and product diversification helped minimize dependency. The focus on customer relationships facilitated primacy with a number of services. Primacy is linked to the effectiveness of the service or product, and is a measure of the degree of importance of the service to customers. Unique competencies in First Nations business development, log marketing and engineering provide competitive advantage that is not easily duplicated. The company has a proven ability to solve problems and get the job done, and it is recognized for those talents.

**Adaptive Core Competencies:** The core competencies are transferable to other resource-based industries in BC and elsewhere. The value proposition can be customized to meet unique customer needs. The blending of core competencies has a reinforcing effect that will serve a variety of customers very well.

**Low Fixed Costs:** The company has purchasing power with some suppliers based on annual sales volume. All lease agreements are short-term, which despite increasing costs, offers scalability and upgradeability. Technological obsolescence is avoided, adding a key defensive capability to technology offerings.

**Financial Strength:** IPAC has maintained a high degree of financial resilience, driven by the relative cycles of forestry consulting versus log brokerage sales. Diversification of sales has created steady cash flows that have enabled the company to remain opportunistic. In addition, the company is 100% equity financed. There are no fixed loan payments that weaken the company during down cycles. However, there have been occasions when the financial performance did not yield economic profits. The propensity of the shareholders to stick it out in down cycles, and to adjust expectations, is a strength compared to companies with passive investors.
4.7.2 Weaknesses

Low Loyalty Based on Market Segments Served: The key point of weakness, relative to key competitors, is that the focus on customer and market diversification compromises customer loyalty. Loyalty is highest where primacy is highest. The current lock-in on low margin government contracts impacts the overall performance of the company. The low margin contracts result in a large proportion of the resources being sub-optimized.

Small Firm Size: The company is relatively small size in comparison to the engineering firms serving alternative industries. Predatory pricing is difficult to defend against.

Conflicting Alliances: Relationships with some First Nations groups often create barriers to working with others. This has a geo-political elements and temporal elements. First Nations communities often compete with one another for key resources and opportunities. If you work with one group you are viewed as a competitor. In addition, changes to the political body – Chief and councilors, often precipitates whole scale house cleaning. Political turnover can be highly disruptive to ongoing business dealings, both internal and external.

4.8 Organizational Fitness

Organizations naturally evolve their design (i.e. work systems, structure, management processes, human-resource system, principles and values, and leadership behavior) to fit their business environment and their chosen strategy within that environment. The alignment enables the business to develop the organizational capabilities and culture needed to compete successfully.
Beer identified a number of barriers to organizational fitness that affect either quality of direction or quality of implementation. The principal barriers currently faced by PAC include:

- unclear strategy and/or conflicting priorities;
- an ineffective top team;
- a top-down leadership style;
- poor vertical communication;
- poor coordination across functions or geographic locations;
- inadequate leadership and leadership development.

The organization is the mechanism that takes strategy, in the context of environment, resources and history, and transforms it into outputs. The organizational components responsible for the transformation process are the work, the people, the formal organizational arrangements, and the informal organization. The informal organization may be regarded as the organizational culture. Contingency theory suggests that the greater the degree of congruence among the components, the more effective will be the organization. The congruence model is driven by strategy and task, but the company must respond to changes in the environment as it considers new inputs, processes and outputs. Strategy is closely correlated with quality of direction, while quality of implementation is correlated with human resources. The people, in combination with various systems, are the organization. PAC has a high degree of congruence among the components, making it reasonably fit for its current environment; however, the environment is very dynamic. Quality of direction and quality of implementation need attention simultaneously. PAC faces three distinct challenges – strategic fit, strategy-organization fit and internal organization fit.

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4.8.1 Strategic Fit

*Strategic fit* is the degree to which effective strategic decisions are made that enable the organization to respond to and capitalize on the demands, constraints and opportunities presented by the environment. This challenge, more than any other, relies upon marketing skill and business acumen. Environmental scanning and communication with customers are the best methods for determining what demands and opportunities exist within the environment. IPAC is weak in this regard. The principals are distracted working *in the business* as opposed to *on the business*. There continues to be inadequate leadership training at the lower levels. The corporate vision is not clear, especially in light of the rapidly changing environment and emerging opportunities. The company considers itself to be "opportunistic" rather than "visionary", but it lacks slack resources with which to fully analyze opportunities or strategic alternatives. A clear vision and statement of shared purpose will guide internal staff with regard to analyzing and capitalizing on opportunities. The two main needs to excel in strategic fit are to improve marketing skills so as to identify opportunities, and to provide a framework via a clear vision for then analyzing and capitalizing on the best opportunities.

4.8.2 Strategy-Organization Fit

*Strategy-organization fit* is the organizational structure that meets the demands of the business strategy. IPAC's structure fits the demands of the current strategy and a dynamic environment. The task facing various teams that comprise the organization is to provide customized solutions to what are often complex, multi-disciplinary projects. Project managers are assigned specific client portfolios and accountabilities, and task execution and coordination are very good. The company effectively deploys existing and new technologies, and human resources to accomplish tasks. Team composition is optimized around talent and cost to deliver cost effective solutions for customers.
4.8.3 Internal Organization Fit

*Internal organization fit* is the ability to ensure that the four components (i.e. work, people, formal organizational arrangements, and informal organization) remain congruent. This is a process of addressing functional issues and converting them to relational considerations. The "Adhocracy" structure minimizes the stickiness typical of a rigid hierarchy and formal job descriptions. The open-structure promotes flexibility and adaptability, but some hierarchy is desirable and thus has been maintained. Jaques\(^6\) pointed out that the reason that we have a hierarchical organization of work is not only that tasks occur in lower and higher degrees of complexity, but also that there are sharp discontinuities in complexity that separate tasks into a series of steps or categories. IPAC has residual core competency as a full-phase, multi-disciplinary, service provider. Services are often "long-linked", and a moderately hierarchical structure is well matched to these tasks because it promotes efficiency and accountability.

4.8.4 Fitness Summary

IPAC is generally fit for its current environment, but adjustments are required to improve the quality of direction and the quality of implementation. Quality of direction will stem from clear strategy and consistent priorities. The guiding coalition, which is currently comprised of the owners and senior management personnel, must expand in order to engage staff at all levels. The resultant team will foster leadership, customer sensitivity and market awareness. A focus on organizational learning and strategic adaptations will foster a culture that produces results. Quality of implementation will also improve with better vertical communication and enhanced coordination across functions and geographic locations. HR policies that link employee accountabilities to critical success factors and key performance indicators must be refined. Improved morale and organizational depth will drive productivity gains.

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The company has demonstrated an ability to adapt to changes in its environment. It survived and grew when others failed. The structure and internal processes fit a dynamic environment and promote selective flexibility. The organizational structure evolved in response to the changing environment. The company shifts value propositions with relative ease, transforming inputs into customized outputs that promote purchasing power parity.

Scanning, which is an integral part of marketing, will reveal important and potentially higher margin markets. A systematic framework for converting market intelligence into real opportunities and strategies, and then into action is essential. Minor constraints such as financial considerations and technologies are overshadowed by the current human resources issues. Staff turnover and associated challenges are the primary constraint at this time. Corporate commitment to new HR policies is required to convert the existing human resources into an industry leading team that will provide sustainable competitive advantage.
5 EXTERNAL ANALYSIS

5.1 Customer Analysis

5.1.1 Market Segmentation

Sales are separated into four broad categories, based primarily on broad affiliation. This procedure yields generally homogeneous segments; however, differences in service characteristics, utility and competitive priorities exist. It is difficult to refine the segments further because the macro-segments would be too small for meaningful strategy development and implementation.

Table 5.1 Sales Segmentation

<table>
<thead>
<tr>
<th></th>
<th>Licensee</th>
<th>Government</th>
<th>First Nations</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BCTS</td>
<td>Other</td>
<td>Forestry</td>
<td>Business</td>
</tr>
<tr>
<td>2001</td>
<td>48.8</td>
<td>17.5</td>
<td>10.8</td>
<td>11.2</td>
</tr>
<tr>
<td>2002</td>
<td>49.2</td>
<td>15.1</td>
<td>9.4</td>
<td>15.0</td>
</tr>
<tr>
<td>2003</td>
<td>33.1</td>
<td>18.0</td>
<td>19.3</td>
<td>18.5</td>
</tr>
<tr>
<td>2004</td>
<td>18.2</td>
<td>35.2</td>
<td>7.5</td>
<td>28.4</td>
</tr>
<tr>
<td>2005</td>
<td>31.8</td>
<td>36.5</td>
<td>7.8</td>
<td>14.5</td>
</tr>
<tr>
<td>2006</td>
<td>27.4</td>
<td>44.2</td>
<td>7.1</td>
<td>6.9</td>
</tr>
</tbody>
</table>

The increased proportion of sales in the "Government" segment versus the "Licensee" segment is a direct consequence of the volume take-backs by government, and restructuring in the forest industry. In 2006, IPAC focused on increasing sales in the "Private" segment.

5.1.2 Segmentation Attributes

Generally, IPAC is a needs satisficer over a broad range of services. The diversity of services contributes to this capability. The principal segmenting dimension is customer related - geographic, needs, attitudes, activities, interests and opinions. Demographics do not influence sales. Situation-related segmentation looks at service features, use patterns and the buying
situation. These are not useful for segmenting markets in the forestry consulting industry. Moreover, it is difficult to tie market strategies to what are often discreet attributes.

Table 5.2 summarizes the key attributes for each segment. The market mix is driven by these attributes. There is significant correlation between the competitive priority, rivalry and pricing options. There is also a high degree of variability as to the nature of contract dealings and ultimately, the attraction of the segment.

Table 5.2 Segmentation Attributes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Licensee</th>
<th>Government</th>
<th>First Nations</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market mix:</td>
<td>Price, Product, Place</td>
<td>Price, Product</td>
<td>Product, Reputation</td>
<td>Product, Reputation</td>
</tr>
<tr>
<td>Competitive priority:</td>
<td>Cost, speed, flexible</td>
<td>Cost, dependable</td>
<td>Quality, flexible, dependable</td>
<td>Quality, flexible, cost</td>
</tr>
<tr>
<td>Rivalry:</td>
<td>Moderate</td>
<td>High</td>
<td>Low</td>
<td>Low - Moderate</td>
</tr>
<tr>
<td>Pricing options:</td>
<td>Moderate</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Purchase strategy:</td>
<td>Optimiser</td>
<td>Satisficer</td>
<td>Satisficer</td>
<td>Optimiser</td>
</tr>
<tr>
<td>Nature of contracts:</td>
<td>Incomplete</td>
<td>Complete</td>
<td>Incomplete</td>
<td>Complete</td>
</tr>
<tr>
<td>Purchase importance:</td>
<td>Moderate - options</td>
<td>High - time</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Loyalty:</td>
<td>Moderate</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Risk tolerance:</td>
<td>High</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Confidence:</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Moderate - High</td>
</tr>
<tr>
<td>Relationship oriented:</td>
<td>Moderate - High</td>
<td>Low Contract Driven</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Relative education:</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>Mixed</td>
</tr>
<tr>
<td>Attraction:</td>
<td>Earning</td>
<td>Stability</td>
<td>Earning and network</td>
<td>Earning</td>
</tr>
</tbody>
</table>

5.1.3 Analysis of Traditional Customers

Detailed customer analysis reveals very few undesirable customers. Poor contract performance is usually related to internal resource constraints, not customer attributes. Most notably, human resource limitations can result in poor productivity and quality. Internal quality
assurance identifies and corrects shortcomings as they occur, but the overall contribution to net profit from the project is impacted. Constraints imposed by low-price bidding impact project delivery and contingency options.

It is reasonable to generalize that the most competitive segment is Government. Margins tend to be lowest when servicing that segment. However, the segment offers a relatively high degree of stability to the company. Government contracts tend to be relatively complete. In contrast, licensee contracts are incomplete. Indirect market determinants, such as fluctuating commodity prices, add contract uncertainty. Relationship-specific investments increase susceptibility to the holdup problem. First Nations contracts are similar, but they seldom invoke the holdup problem. First Nations contracts tend to be stable as long as the political leadership group is stable, but changes induce instability. The main challenge with this segment is that relationship capital can be lost very quickly. Interestingly, customers in this segment form prejudices against persons affiliated with prior leadership. Relationship capital often goes negative after a leadership change. Contracts in the Private segment tend to be smaller. Discreet projects offer little stability, but purchasing power parity gained with customization leads to improved margins.

Each segment and the customers within it offer pros and cons. It would be unwise to avoid any segment or to confine sales to only one segment.

5.1.4 Analysis of Alternative Markets

5.1.4.1 Market Classification

Alternative markets are identified as belonging to one of five broad classifications: invention, innovation, product modification, improved service or old services to new customers.
**Invention:** The risks associated with invention preclude this alternative in the context of forestry consulting. Without a need, want or desire, there is no basis for an invention. The maturity of the forest industry and a general lack of knowledge in other fields make the probability of developing completely new products that fill unmet needs or wants highly unlikely.

**Innovation:** A technical improvement to a product or service is an innovation. The key is to identify new ways to add value to the customer. Again, due to the maturity of forest industry markets, there are limited opportunities for true innovations involving technical improvements; however, an example would be the roll out of GPS technology. Such opportunities do arise, but are limited by an individual firm’s ability to invest in or control technological changes.

**Modification:** Modification occurs when a new product or service is introduced. This is the cornerstone of new product or service development in the context of the forestry consulting industry. Successful modifications must generate added value for customers. Typically, in the forest industry, cost is a key value. Modifications that reduce costs are often acceptable, whereas those that do not are rejected. The added value must align with competitive priorities.

**Improved Service:** Improved service builds relationship value. Transaction ease and transference of intellectual capital to the customer are key elements. Business to business relationships are strengthened by met expectations, not interpersonal compatibility. The underlying premise is to ‘under-promise and over-deliver’. This alternative does not usually create markets, because presumably the customer was there already, but it certainly breeds loyalty and repeat business. It also builds reputation value, which assists sales in all markets.

**Old Products or Services to New Customers:** New customers include those in the forest industry, as well as those in other industries. The offering may include any of the first four categories; however, it is less risky to scan the macro-environment and look for options to sell standard offerings. There are a number of advantages to this strategy. First, offering existing
services or products allows the manager to focus on customer-oriented particulars. Very often, different customers use similar services in different ways. This nuance is the key to meeting expectations. There is usually limited relationship resilience with new customers. Trying to roll out inventions, innovations or radically modified services is risky, and can quickly alienate a customer and impair reputation. A relatively easy fit is to consider new customers in the same industry in new geographic areas. This has been the normal growth pattern for most forestry consulting firms, including IPAC. The weakness is that this strategy reinforces industry-specific dependencies. A more useful diversification, though more challenging, alternative is to seek new customers for existing services in other industries.

5.1.4.2 Scanning

The main marketing challenge is meeting with prospective buyers to understand their needs. It is difficult to penetrate alternative markets unless customers perceive that the option adds value over their next best alternative. This is only possible if pressure points or weaknesses can be identified. However, as with basic ecology, niches are not unoccupied for long. It is more likely that alternative markets must be created rather than discovered. Environmental scanning is done to understand markets well enough to identify pressure points. Scanning must be done thoughtfully to avoid collecting bad information. It is a continuous exercise. Customers are wary of "salesmen". IPAC collects information through network relationships at all levels in the organization. Often, communication with customers at the operational level reveals real opportunities for modifications or service improvements. Customers capture returns when routine dialogue leads to value added services. In addition, working with First Nations groups is an excellent medium through which to scan alternative industries, as well as to identify pressure points. Resource based industries are obligated to consult First Nations on any developments that potentially infringe on aboriginal rights. Such consultations present exceptional opportunities to discuss mutual needs at relatively senior levels.
Scanning of alternative industries has revealed opportunities to diversify the customer base in alternative industries. For segmentation purposes, customers in alternative industries are included in the under ‘Private’ sales because they represent a relatively minor proportion of annual sales. Micro-segmentation is frustrated by sporadic and diverse sales to date; however, there are commonalities that allow these sales to be grouped. The commonalities are included in the segment attributes shown in Table 5.2.

The dominant point of entry into alternative industries with the current service portfolio is in engineering. The engineering work done in the mining and oil and gas industries is very comparable to that done for forest industry customers. In fact, access work done for the mining and oil and gas industries must comply with forestry regulations or standards. Industrial road systems often experience shared use. The design requirements, construction methods and project logistics for road and drainage structures are identical. The regulatory requirements, technologies, construction equipment, organizational competencies, customer expectations and professional practices are also very similar between industries. These alternative industries represent a timely opportunity for industry diversification. The target customers in the mining and oil and gas industries also produce commodity products, but these industries are currently experiencing an up cycle whereas the forest industry is in a down cycle. Supplier prices are relatively high compared to the forest industry.

The entry strategy is to offer prices below current market prices. Demand elasticity caused prices to increase. At the present time, the shortage of suppliers creates opportunity for relatively uncontested entry. The relentless focus on costs over the past five years produced relatively low cost processes and organizational structure compared to existing engineering firms servicing alternative industries. Once the markets have been penetrated, the low cost structure will permit the company to compete successfully for a prolonged period, even as markets soften.
5.2 Threats and Opportunities

5.2.1 Threats

**Human Resources:** The lagging performance of the forest industry has caused many skilled workers to move into the oil and gas, mining and construction industries. Retention, recruitment and motivation of employees are mission-critical. Employee attrition is compromising performance relative to shareholder, customer and employee objectives. Turnover is affecting morale, which presents a critical short-term challenge. Closely linked to high turnover among senior staff is the resultant loss of corporate knowledge and relationship capital. ‘Brain drain’ is a critical issue beyond the mere loss of human resources with which to expedite projects. Many years of relationship value are lost when key individuals leave positions that interact with customers. These people are integral to environmental scanning and marketing efforts. It takes time to train replacements, and some positions may become a ‘revolving door’ in the absence of appropriate policies.

**Weakening Indirect Demand:** The US housing market is a determinant of lumber prices. The strong housing market over the past two years propped up lumber prices. However, the US economy, with almost 8.7 trillion dollars debt, is tenuous. Most economists agree that a significant correction is imminent. A correction will impact housing starts, which have already dropped significantly. Some home owners in the US (e.g. California) are walking away from mortgages, and there is speculation that a correction has begun. If so, the demand for Canadian lumber will decline further. Most sawmills are already near shut down. Recently, a major forest company executive stated “we, like a lot of other companies, are running numbers to make sure we can generate cash to pay our bills. We’ve been running close to the wire for a while now”.

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7 Markus, E. Kamloops This Week Newspaper, Kamloops, BC: Newspaper Article, 6. Quoting Bob Taylor, General Manager of Weyerhaeuser Canada, B.C., Sunday, October 8, 2006.
Forest Industry Dissolution: There is much speculation that softened commodity markets will precipitate shutdowns in the forest industry. The resultant lay-offs will put a lot of people into the labour pool with considerably less contract work available. Relatively low compensation rates in both the forestry consulting and government sectors will encourage many individuals to consider forestry consulting as an option, especially those having only forest industry-specific accreditation or experience. Low barriers to entry allow this to occur. Presumably, many of these individuals will also possess superior contacts with residual staff in industry. Price reductions for qualified staff are anticipated because these individuals will possess competitive advantage in cost structure. While this pattern of behaviour has been evident in the past, the effects can span several years. It is entirely possible that due to the long-term outlook for the industry, the forest industry will not staff up even as lumber markets improve. The resultant oversupply of forestry consulting capacity may be prolonged.

5.2.2 Opportunities

The forest industry is severely threatened by low commodity prices and reduced output is inevitable. Manufacturing capacity will almost certainly shift toward value-added manufacturing as opposed to its current emphasis on primary breakdown. Companies that compete as primary breakdown facilities will undoubtedly become even more cost-driven. As described in Section 5.2.1, the forestry consulting industry is also threatened, but opportunities exist.

Corporate Dissolution within the Forest Industry: Corporate dissolution is inevitable as weak commodity markets force temporary and permanent sawmill closures in BC. The trend exhibited by major licensees over the past three years to carry high staff levels was probably driven by strong lumber markets, protectionism, positioning and loyalties. But the economic realities imposed by a cyclical industry will lead to new paradigms. The “Forestry Revitalization Plan” permits major licensees greater latitude with respect to cut control (i.e. how closely their
actual annual harvest matches their respective tenure allocations). If staff levels remain low, the
licensees will be able to ramp operations up or down in sync with commodity markets.
Accordingly, forest licensees will be reluctant to 'staff-up' again following the layoffs that occur
during the current down cycle. Under new management paradigms and more complete business
to business relationships, well positioned consulting firms may be able to fulfill the labor needs of
customers while offering greater flexibility and long-term cost advantages. Those customers that
are afforded the ability to quickly reduce their labor costs during slow periods will gain
competitive advantage within the forest industry. Redundant or sub-optimized staff increase
fixed costs. Self-employed consultants will be impacted in down cycles more so than large,
diversified consulting firms. Larger firms can often shift seamlessly to alternative customers.

**Deepening Awareness of Total Costs Versus Short-term Costs:** The long lead times
required to build ST1 complicate calculations of total costs. The hierarchical structure of most
major forest licensees results in obvious management-silo effects. Total costs are often not duly
considered. The short-term focus on costs and annual budgets conceals the true cost advantages
of quality work. Good design work yields cost advantages years later. Forestry development
personnel often exchange quality for lower costs at the expense of subsequent operational costs.
Poor layout drives logging costs up. Poor site planning also impacts reforestation efforts. More
importantly, poor quality ST1 impacts manufacturing options, the sales mix and market
sensitivity. Quality matters, it always has. Most firms only measure and report short-term costs.
This is especially true during down cycles when continued operations depend on immediate costs.
Quality implications are long-linked. Consulting firms capable of offering longer-term solutions
that reduce total costs will be able to capture market share. Moreover, the value proposition will
be valid and sustainable. A refined marketing mix will be tailored to meet this need.

**Strong Alternative Industries in BC:** The booming economy and strong commodity
prices in the mining and oil and gas industries spurred many new developments. The BC
government’s move to promote summer drilling programs in the oil and gas sector via tax incentives inspired many producers to push summer operations. Accordingly, the activity for road engineering firms expanded. The challenges associated with summer operations in northeast BC opens the door for engineering firms capable of delivering cost competitive and timely solutions. The oil and gas industry is extremely time sensitive. Cost is not the main priority. IPAC possesses unique capabilities in terms of its knowledge of road construction methods and techniques in this region based on the experience senior engineering staff.

**Increased Business Activity with First Nations:** First Nations are becoming increasingly involved in all industries on their traditional lands. However, they often lack capacity to capitalize fully on opportunities. IPAC has demonstrated its ability to assist First Nations in this regard. The roll out of new First Nations opportunities will yield many options for technical and business consulting services, for which IPAC is well positioned.

**Competitive Strengths:** The short-term outlook for the forestry consulting industry is poor due to an oversupply of firms. A prolonged down cycle and low exit barriers will reduce the number of competitors. The imminent downturn will provide positioning opportunities for lean, nimble organizations. IPAC’s un-leveraged financial position, market diversification, staff competencies, organizational structure, relationships and geographic distribution yield competitive advantages. Better quality of direction and quality of implementation will allow IPAC to survive, and possibly thrive, as others fail. The new landscape will bring barriers to entry that will protect large consulting firms that survive due to diversification strategies and scale effects. Although the down cycle will bring challenges for IPAC, the competitive pressure will eliminate less adaptable competitors. It may be possible to gain market share in the residual industry, and that is the strategic aim.
5.3 Summary of External Analysis

IPAC operates in four main market segments. Each segment offers varied benefits to the company. The ‘Government’ market segment offers increased stability but decreased profitability. Interestingly, the sales profile for 2006 shows a relatively high proportion of sales to the ‘Government’ segment. Sales were down in the ‘Licensee’ segment due to restructuring of the forest industry and reduced harvest volumes due to volume take-backs. Overall, the poor financial performance in 2006 may be largely attributed to increased sales dependency on ‘Government’. In addition, the increase in ‘Government’ sales was accompanied by a decline in sales in the ‘First Nations’ segment. The traditional markets are challenging given the current macro-environmental factors. Some key determinants, especially the weakening US economy and lower commodity prices, indirectly threaten the forestry consulting industry.

Fortunately, opportunities are anticipated for more agile, diversified and financially strong firms. The growing participation by First Nations in resource based industries creates opportunities for many new business relationships. First Nations groups often lack the capacity to fully exploit the myriad of opportunities that they encounter. Well positioned consulting firms can help them to achieve their mission. In addition, corporate dissolution within the forest industry is expected to set the stage for new paradigms in forest management. Again, well positioned consulting firms will be poised to offer the major licensees improved flexibility that will allow those customers to perform better over the long-term. Diversification will be essential to overcome the business volatility that will be adopted from these customers under this new management paradigm. Finally, opportunities also exist in alternative industry segments, such as oil and gas and mining. Well positioned consulting firms will be able to transition between industries without significant disruption to the existing organizational structure or design processes. Flexibility, adaptable structure and quality human resources will be essential to capture these opportunities.
6 STRATEGIC BUSINESS OPTIONS

6.1 Business Options

Declining financial performance motivated the principals of IPAC to consider various business options that would not only protect shareholder assets, but also facilitate future succession planning. The options entail varying levels of energy, business acumen and financial commitment. The ability of the principals to extract themselves from the operations of the company depends upon the economic performance of the company. If the company under-performs it will be difficult to hand over to new management or to sell.

Two primary succession plans exist, including passing the company, intact, over to new management or selling the company. In the first instance, the principals would maintain ownership and continue to draw earnings or dividends on an annual basis based on financial performance. The second option entails the sale of the company, or a portion thereof, either to an employee group, competitor, strategic investor or financial investor. The customary method of valuing the company for sale is to look at the ‘reconstructed EBITDA’ – a process of adding back non-recurring or owner-related draws or expenses, such as bonuses, travel allowances and so on, that would not be incurred if the company was managed by someone other than an owner. The sale of the company to the employees is a viable option, but often does not generate the same value as a sale to either a strategic or financial investor. Institutional buyers often have different motivators and greater means, and therefore, offer a higher price. The sale of the company to a competitor is not usually favoured because the due diligence process permits the competitor too much access to proprietary information, which may be damaging should the sale not complete.

Over the long-term, shareholder value will be lost if the company is unable to earn economic rents. The immediate business options that were considered include;

➢ Wind the business down to preserve the existing shareholder equity;
Maintain the status quo and hope for new opportunities to emerge;  
Repositioning, whereby the existing technologies and collective skills are shifted toward customers in alternative markets so as to generate improved margins; and  
‘Creative destruction’ wherein the existing business is abandoned and entirely new business processes and service offerings are sought in order to create sustainable shareholder value.

6.1.1 Wind the Business Down

Erosion of shareholder value occurs when costs exceed revenues. Opportunity costs are incurred by the shareholders when the company does not earn economic profits. For the purposes of calculating the weighted average cost of capital, the shareholders set the cost of equity (Ke) at 12% based on alternative investment opportunities yielding a 12% return. However, the decision to wind the business down cannot be made solely on the basis of whether short-term economic profit exceeds a given threshold. Exit barriers exist that create a considerable degree of lock-in. In addition, significant intrinsic factors must also be considered.

6.1.1.1 Exit Barriers

1. Fixed costs will be incurred on various equipment leases, including computer equipment, GPS equipment and vehicles. Current lease agreements include specific buy-out arrangements for early termination. Fixed costs will also be incurred on leases for office premises in three locations. Lease terms range from one to three years, with time remaining on all leases. The principals (i.e. shareholders) are committed to these leases for the full term. Options to sublet exist, but entail a degree of cost and liability.

2. The main office building in Kamloops is owned by an associated company. The current lease is not subject to penalty per se; however, the company that owns the building will incur
costs to place a new tenant or sell the building. Actual costs incurred would depend upon the length of time that the building is empty.

3. Contractual obligations currently exist, especially on government contracts. Considerations include loss of deposits, and/or operating losses due to lost efficiency or higher costs to complete contracts with decreased staff depth and under-employed assets. Deposits are subject to forfeiture if contract terms are not fulfilled. Moreover, additional penalties may be incurred if customers have to re-tender work. Most contracts have a one-year term. Renewal options on multi-year contracts can be declined. To avoid financial penalties, all existing contract obligations must be met. The manner in which the existing contracts were bid presumes that certain efficiencies and skills exist and are available in-house. Without a full complement of staff it would be difficult to satisfy customer expectations related to timing and quality of deliverables. Scale and scope economies, as well as learning economies will decline as the volume of work done in-house decreases. The impact of this barrier could be minimized if the decision to cease operations occurred immediately following the government fiscal year-end when contractual obligations are minimized; however, some costs will be incurred in any event.

4. Professional liability for work done by in-house professionals survives the company. The Association of British Columbia Forest Professionals (ABCFP) and the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) govern the conduct of most of the professionals employed by IPAC. Registered Professional Foresters bear personal liability for work they supervise or for documents they sign and seal. Similarly, Professional Engineers and Geoscientists bear personal liability for various prescriptions, specifications and designs. IPAC’s corporate professional liability insurance coverage indemnifies its employed professionals. Presumably, this protection would be lost if the company no longer carried insurance coverage. Although coverage existed at the time that any error or omission occurred, such matters often involve litigation to resolve.
6.1.1.2 Intrinsic Factors

1. PAC currently employs approximately 70 people, many of whom are primary 'bread-winners' who have been employed by the company for many years. The principals are committed to these individuals, and would not consider the option of terminating their employment lightly. Families would be impacted by any decision to wind the company down, and this represents the greatest barrier. The sale of the company to employees would satisfy the shareholder's concerns in this regard. But this option can only be effected if the company remains operational.

2. PAC has established long-term relationships with a number of customers, especially smaller private individuals and some First Nations groups. The company believes its service offerings to be highly effective. Over time, some customers have become moderately dependent upon the company. The manner in which we represent those loyal customers is based on a strong sense of commitment and appreciation. The principals and officers of the company will not abandon these relationships.

3. PAC's core values include integrity, perseverance and a positive outlook. The culture is centered on a positive, service attitude. Winding the company down would be contrary to basic corporate values and the corporate culture. Obviously, PAC cannot continue to operate without earning at least accounting profits. The decision to operate without economic profits would sub-optimize shareholder value, but could be sustainable. To do so would be a values driven decision leveraging shareholder willingness to pay.

4. In order for a succession plan to work, the principals must work 'on the company' as opposed to 'in the company'. A succession plan is necessary in order for the business to survive and thrive after the principals retire. To date, both principals have been very active in the day to day operations. Acting as directors, they have been responsible for setting the vision, providing
primary leadership, making key strategic decisions, and determining operational priorities. Their education, training, experience and collective expertise are predominantly forestry-related, but are applicable to other industries. However, it will take time to apply the dominant skills in new ways and in new venues. Winding the company down will not provide a satisfactory transition period and will prematurely put the principals out of a job.

6.1.2 Maintain the Status Quo

Maintaining the status quo with no strategic changes will not produce desirable results given the long-term outlook for the forestry consulting industry in BC. The forest consulting industry is expected to yield sub-optimum earnings in the near-term, especially relative to opportunities that currently exist in alternative industries such as oil and gas or mining. Customer profiling may marginally enhance profit potential, but will fail to produce the results necessary to survive over the long-term. Skilled workers will continue to be drawn to other, more buoyant and financially rewarding industries. The gradual deterioration of labor in the forestry consulting industry will impair future business options. Ultimately, forestry consulting firms will lose the ability to compete in alternative industries, giving competitors in those markets sustainable competitive advantage. Marketing strategies must ensure that the company is able to compete successfully for highly-skilled workers. Emphasis on efficiency and worker productivity will enhance gross margins, and represents the best alternative for achieving positive results. While a vigil on costs is warranted, further cost cutting is not likely to generate sustainable competitive advantage. The forestry consulting industry has reached a point of diminishing returns on cost reductions. Few cost elements can be squeezed further without eroding productivity or service levels. Self-employed individuals are not constrained to the same extent by government labor regulations, and therefore, have a competitive advantage.
Customer profiling for profit potential is marginally useful. It is difficult to classify customers on profitability because often the customer is not the key determinant of contract profitability. Other factors such as internal dynamics, the weather, operational logistics and technical execution affect the outcome significantly. Very broad, generic segmentation of customers may provide limited insight into customer expectations and relationship value.

6.1.3 Repositioning

Repositioning in the context of this project is hereby defined as a process of shifting the organization into alternative markets through one of three means: innovation, product modifications or old products and services offered to new customers. It involves incremental, customer-centric innovation derived from a series of small modifications rather than major changes. It incorporates elements of game theory, involving the company, its competitors and its customers. The goal is to shift into more profitable markets while minimizing risks and improving service levels. Repositioning emphasizes strategic bundling of existing or modified services offered to new markets. The challenge for firms attempting to reposition themselves stems from “the tensions between protecting revenue streams from existing businesses critical to current success and supporting new concepts that may be crucial to future success.”

Since inception, IPAC has engaged in a process of continuous improvement and adaptation that has resulted in new positioning, and arguably, this strategy is the status quo. Repositioning to date focused predominantly on offering new services or technologies to existing customers in the forest industry, but more recently, new markets for existing services in alternative industries were sought with some success. IPAC is a relatively innovative forest consulting company. It was a leader in offering technologies such as GPS, GIS, computer-aided mapping and full-phase development that included log brokerage and marketing. It was also a

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leader in First Nations tenure management. What separates the current repositioning option from past strategies is the pace at which the company must now move. Major market trends will necessitate more deliberate, rather than consequential, strategies. The option incorporates an emphasis on developing internal capacity for change, including improved congruence between the organizational structure, design processes, resources (i.e. human resources) and the overall marketing strategy.

6.1.4 ‘Creative Destruction’

In contrast to repositioning, which has more to do with innovation and continuous improvement, ‘creative destruction’ is a ‘process of invention’, or more aptly - reinvention. It generally entails abandoning existing business processes and structure in favour of new ones. ‘Creative destruction’ is risky. New product development entails a large amount of risk. The probability of successfully marketing an invention is very low. On average, only one out of sixty new ideas becomes a commercial product⁹.

6.2 Preferred Business Option

Exit barriers and intrinsic factors preclude the option of winding the business down, and ‘creative destruction’ will not satisfy the succession objectives of the principals. The basic impetus for ‘creative destruction’ is real impairment of the existing business model, and the belief that a completely new venture is preferred. The initiative is tantamount to winding down the old business while starting up and launching a completely new venture. But the future for IPAC is not yet so bleak despite the industry being only moderately attractive. As previously stated, the measure of attractiveness of an industry does not determine the profitability of a company within

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it. There are profitable companies in unattractive industries. Corporate sustainability is largely based on a company's relative ability to create competitive advantage. Competitor rivalry is a primary determinant of industry attractiveness, but it is influenced by the relative strength of the other factors. A dynamic industry is expected to produce a dynamic competitive environment derived from competitor and customer responses. Rivals within an industry will have different perceptions of industry attractiveness depending upon relative strengths. IPAC is strong relative to many rivals, and will survive and thrive where others may fail. The confidence surrounding this optimism comes from the knowledge that this view is based on analysis and strategy, not ego.

Corporate and shareholder objectives require the company to thrive, not just survive. The status quo option does not fully harness nor capitalize on the strengths and competencies that exist within the firm. Hence, repositioning as defined in Section 6.1.3 is the preferred strategy. Market influences forced IPAC to evolve, and shaped the company to what it is today. But extremely weak commodity markets drive the need for more rapid, defined changes. The internal structures, design processes and resources must also align with the market strategy.

6.2.1 Rationale for Option Selection

Opportunistic Versus Visionary: IPAC has survived on opportunism. Uncertainties surrounding the long-term composition of the forestry consulting industry make it difficult to rely on visionary tactics alone. While it is possible to envision what the future may, or even probably will, look like, the diversity of macro-determinants that affect the forestry consulting industry, and the lack of control over those determinants, make it impossible to predict with certainty. Setting rigid strategies based on an uncertain future is risky. Accordingly, IPAC has maintained an opportunistic and flexible structure fit for a dynamic environment. There have been many instances when unforeseen events created opportunities, such as in 2004 and 2005 following the 2003 wildfires. The company will remain poised to capitalize on such opportunities.
Organizational Readiness: IPAC is best suited to the repositioning strategy. The organizational structure, adaptive transformation processes, core competencies, network relationships and geographic distribution allow the company to adapt to a dynamic environment. Professional insight and long-term relationships are predominantly forestry-related, but preferred markets have already been penetrated. Success the previous projects make lateral expansion in these markets much less daunting. The organization is well equipped to collect customer information through front line workers that will drive future service and product innovations.

Consistency with Corporate Culture and Values: Maintaining corporate momentum via repositioning is consistent with IPAC's core values. The company prides itself on its ability to get the job done, and touts "exceptional results" within its slogan. To consider any other option than to carry on would be inconsistent with the culture. Customer-centric innovation is "a process for making innovation deliver results that meet or exceed market expectations".10

Risk: Repositioning is the least risky option. Winding the business down will almost certainly reduce shareholder assets due to the cost of buying-out leases and other shut-down costs. Creative destruction is extremely risky due to the obvious difficulties of not only winding up the current business, but also in trying to undertake the work necessary to develop a new business venture. The risks are too high given the retirement plans of the principals. Maintaining the status quo, while being more conservative from an investment perspective, is more risky because the investments are put in jeopardy by external market pressures. Moreover, to sit and do nothing different in the face of softening markets would cause the company to lose advantages it currently has over many of its rivals. The macro-environmental determinants that weigh on IPAC have motivated other proactive rivals to respond as well. Ultimately, the company must do at least as much as its closest rivals if it is to maintain market share – the so-called "Red Queen

Effect' wherein you must run faster and faster just to stay in the same place. Though repositioning will put some investments at risk, it is most likely to generate shareholder value better than any of the other alternatives.

Financial: IPAC is financially strong, despite relatively poor earnings over the past year. The lack of debt provides resilience. The resources are in place to engage a repositioning strategy. In turn, successes with the strategy will generate profits with which to add resources and continue to finance the process.

6.2.2 Organizational Readiness

The organization evolved with a dynamic environment. The 'responsive adhocracy' structure promoted and reinforced the organizational culture. Line reporting was de-emphasized in favour of more informal structure comprised of ad hoc working groups, teams and networks. The main attributes of the organizational architecture are that it fits existing people into the design, assigns authority and responsibility to people and groups, promotes strong cultural values, and creates an accountable, adaptive and team-oriented work environment. The structure taps the collective ability of the organization to find new solutions, methods, relationships, customers, and direction with clear accountabilities. The structure promotes human resource development.

The central theme of the current organizational structure is that it is adaptive but retains a strong division of labor. Teams draw together people with various skills from various disciplines, but opt for a high degree of horizontal integration rather than vertical integration. Figure 1.1 and 1.3 depict this concept. Team members possess equal authority, although, the power and influence of individual members will vary according to position, expertise or personal charisma. Project Managers provide the primary coordination mechanism. This position involves budgeting, project tracking, resource coordination and invoicing, as well as communication with
other Project Managers, Divisional Managers and Operations Managers. Routine tasks borrow
from internal (or external) SOP’s, policies and procedures to ensure technical competence,
consistency and efficiency. Decision rights reside at the project level; however, divisional
managers oversee all projects within respective divisions and resolve resource conflicts. Project
Managers are responsible to understand service elements and meet customer expectations. The
budgeting process ensures that projects meet financial objectives to the extent possible, given the
resource constraints.

Informal relationships are critical to the firm’s ability to meet disparate goals. The
formal roles in the organization are important for reporting and accountability, and provide a
legitimate basis of authority, but too much hierarchy causes a breakdown in teams. The political
structure is displaced by strong culture. Internal conflicts arise from time to time, especially
around scarce resources. Hierarchy and positional authority are used to resolve conflicts.

The organization possesses many crossover capabilities that address customer needs in
the primary market segments. The highly adaptive structure permits several projects to be
ongoing simultaneously. Points of contact with customers occur at all levels. Complementarities
are often readily identifiable, both internally and externally. These add to options for improved
service, or modified offerings. Projects undertaken in a particular market segment often generate
assignments in other segments as customers are driven to capture efficiencies or other added
values. In the case of First Nations, there is a high degree of crossover to the other segments.
Similarly, expertise garnered in one segment is often applicable to other segments. The ability to
move between segments and to explore complementarities provides competitive advantage
relative to less diversified firms.
6.3 Corporate Objectives

The "balanced scorecard" methodology looks at the business from four perspectives. IPAC's immediate problem emphasizes the innovation and learning perspective and the internal business perspective. The financial perspective and customer perspective are deferred, but no less important. The innovation and learning perspective addresses how to improve and create value for customers, while the internal business perspective addresses what a company must excel at if it is to achieve its goals. How the company looks to shareholders, the financial perspective, is relevant over the long-term for succession planning purposes. But it is understood that short-term investments are required to position the company appropriately. The customer perspective considers how the company looks to competitors. The marketing mix will match customer demands for each segment. The internal business perspective addresses that imperative.

The following hierarchy reveals how corporate objectives, the vision and strategies translate into measures for each perspective, the vision and corporate strategies.

Corporate Objectives
□ Vision
□ Strategic Goals (for each Perspective)
□ Critical Success Factors (CSF) for each Goal
□ Key Performance Indicators (KPI) for each CSF
□ Targets for each KPI

Three distinct groups must be served by the corporate objectives;

Customers: To help customers effectively fulfill their mission, and to consistently meet or exceed expectations.
Employees: To provide a challenging and rewarding environment that promotes personal development, teamwork, innovation and corporate growth.
Investors: To realize sustainable shareholder value and economic value added (EVA ®).

The vision is to increase the proportion of total sales in the 'consumer durables', 'fashion/jobbing' and 'super-value services' quadrants predominantly through growth in

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preferred market segments; thereby reducing the proportion of sales that compromise corporate objectives. Growth in these markets tends to increase purchasing power parity, leading to better margins and an emphasis on effectiveness rather than efficiency.

The strategic goals for the Internal Business Perspective include:

1. To excel at winning preferred contracts.
2. To excel at service excellence.
3. To excel at building customer relationships and loyalty.

The strategic goals for the Innovation and Learning Perspective include:

1. To be a leader in the industry in process and technological innovation.
2. To create competitive advantage and benefit from unique core competencies and strengths that add value for customers faster than our competitors.
3. To be an effective learning organization that continuously adapts and improves.

6.4 Target Markets

The objective of the market strategy is to create sustainable EVA by identifying markets where the company has competitive advantage and creates value for customers. The basis of any value proposition is to fill a need and to be competitively different.

The “Complexity Grid” model shown in Figure 6.1 displays the existing service offerings, net of log brokerage, based on relative market uncertainty (number of customers) and current service complexity. Commodity offerings are typically high volume, low variety sales with limited complexity. Margins on commodity services are usually low. In contrast, margins associated with offerings in the “fashion/jobbing” and “super-value services” quadrants tend to be higher, reflecting increased customization or complexity, low volume and high variety.

The services provided to the forest industry are commoditized by standard operating procedures, practices guidelines and professional standards. Customers strive to commoditize offerings where possible in order to drive their costs (i.e. prices) down. The efforts of forest
industry customers to reduce costs caused most services to shift toward the commodity quadrant. In comparison, the highest degree of customization in IPAC’s service portfolio occurs with business consulting services. Highly commoditized services constitute almost half of IPAC’s annual gross sales. Offerings in the ‘super-value services’, ‘fashion/jobbing’ and ‘consumer durables’ quadrants usually yield better margins than those in the ‘commodity’ quadrant. Customization leads to purchasing power parity. Decreasing the proportion of commodity sales is expected to improve margins.

Figure 6.1 Current Service Offerings Positioned on the Complexity Grid

Successfully competing in any quadrant requires specific strategies, and has implications to operational processes and design. To a degree, only a small, flexible professional services firm could successfully operate in all four quadrants, which confirms the Adhocracy structure of IPAC. Organizations naturally evolve their design to fit their business environment and their chosen strategy within that environment. It is this alignment that enables the business to develop the organizational capabilities/culture needed to compete successfully. There are two distinctly different ways to effectively decrease the proportion of sales within the ‘commodity’ quadrant.
The first is to reduce commodity sales in *absolute* terms by abandoning services and associated customers in the ‘commodity’ quadrant. The second strategy is to reduce commodity sales in *relative* terms by increasing sales in other quadrants while maintaining the current volume of commodity sales. This second option produces slower results, but maintains sales volume.

The preferred strategy is a blend of both options – to pursue preferred markets while reducing the proportion of contracts taken that erodes margins. Consistent with the *pareto principle*, customer profiling will promote apparent performance improvements. However, due to the many internal factors that affect the profitability of any given contract, a conservative approach to this form of screening is recommended. Targeting the most desirable markets and customers while focusing marketing efforts on preferred growth segments will facilitate both corporate growth and diversification.

6.4.1 Existing Markets

IPAC will maintain, and focus growth toward, existing markets in the ‘First Nations’ and ‘Private’ market segments. Relationship marketing will promote an understanding of needs that allow incremental projects to be identified. Typical service offerings in these segments fall into the ‘consumer durables’, ‘super-value’ and ‘fashion-jobbing’ quadrants. The low number of customers and increased complexity associated with customized offerings account for typically superior margins. The desire to focus on these segments is two fold; first, improved margins, and second, the prospect of market positioning that satisfies non-financial corporate objectives.

Reduced emphasis on the ‘Licensee’ segment is desirable in the short-term given its current volatility; however, the market will not be abandoned. Relationship marketing in this segment must consider new paradigms that corporate dissolution and downsizing may present. The benefits will include the potential to solidify or gain market share in the new environment, as
well as to assist with employee recruitment if downsizing occurs. In the short-term, dependency in this segment will increase vulnerability. Contingency plans must be put in place to deal with potential project cancellations. If contracts become available in preferred markets, it will be advisable to allocate scarce resources to alternative markets.

Given the nature of the contracts held, the ‘Government’ segment provides stability but erodes margins. The imperative to maintain scale economies in order to implement human resources strategies supports an aggressive approach to competing in this segment. However, the total proportion of sales in this segment must be reduced in order to improve margins.

6.4.2 Modified Offerings to Existing Markets

Applying modified offerings to existing markets is consistent with a repositioning strategy. This will be the cornerstone of the short-term innovation and marketing initiative. The modified offerings will leverage existing competencies and corporate strengths to provide customized solutions. By default, the customization will push these offerings into the non-commodity quadrants on the complexity grid. Relationship marketing in all segments will facilitate this process. Within the ‘First Nations’ and ‘Private’ segments, the discussions will focus on disparate projects, as well as bundling of existing services to maintain relationships over time. For the ‘Licensee’ segment, the focus must be to assist them to find economies that allow them to gain competitive advantage. In their industry, that is the dominant proposition that will be considered. Organizational theory suggests that the hierarchical structure of government organizations limits their pace of innovation. Accordingly, customers in the ‘Government’ segment are less likely to embrace modifications or innovations. The best chance of new market successes in this segment is to pursue market share in silviculture and planning. While this work is not necessarily a modified offering, it does represent growth opportunities for IPAC due to the expanded volume of work with BCTS due to volume take-backs and re-allocations.
6.4.3 New Markets

IPC will focus on developing markets in the ‘First Nations’ and ‘Private’ market segments, especially where overlaps exist with alternative industries. These segments enable complementarities to be generated that satisfy the basis for the value proposition for more than one customer at a time. Aligning the needs of customers in various industries to engage First Nations in new business ventures with the needs of those First Nations groups to develop capacity in business presents win-win opportunities.

6.5 Dominant Positioning Strategy

The historic positioning strategy employed by IPC is differentiation. The company employs cost reduction strategies, but is not able to compete on the basis of low costs. The relative size of the company with its associated overhead expenses precludes it from competing on costs alone. There is a distinction between firms that specialize and those that differentiate. Specialized firms in the forestry consulting industry often differentiate around specialized services if they can avoid competition, and these are differentiators. Those firms that focus on specialized services in order to generate efficiencies and compete on price are cost-based. True differentiators are usually unable to compete on price, and must add value with non-cost elements. Geographic location is a basis for differentiation. In those instances, the processes and organization are customized to meet unique customer priorities. Instances of high margins on commodity forestry services are rare. Differentiation continues to be the dominant strategy in the forestry consulting industry, but costs are becoming increasingly pertinent as customers separate out various contract phases.

IPC has, and will continue to use, differentiation as its dominant strategy, but will remain cost vigilant. Given the high degree of cost sensitivity of the major customers in all
market segments, this is imperative. In order to compete successfully as a full-phase service provider, a focus on costs will be essential. The risk is that the company might get caught in the middle with its strategy. Clearly, strategies must be employed to drive costs down, but cost reductions will be best achieved through productivity enhancements rather than cost cutting. Continued effort to increase the proportion of sales in the super-value and fashion-jobbing quadrants will hinge on differentiation strategies. New services must add value for customers. The overall direction will entail a high degree of interaction with customers to generate service and relationship enhancements. Cost-based initiatives will focus on contract phases that typically lie in the commodity quadrant. Subcontracting to specialty firms may be an option that combines differentiation and low costs. That said, avoiding positional ambiguity is imperative.

6.6 Value Proposition

Value propositions will be adapted to each market segment and the customers within it via an understanding of competitive priorities. The marketing mix – price, product, place and promotion will reflect the preferred blend for relatively homogeneous groups of customers. The value proposition must have two compelling components: it must satisfy a need and it must be competitively different. The second component is the basis of differentiation. Essentially, IPAC will differentiate itself by creatively engaging existing core competencies and internal strengths. The company must freely acknowledge its inability and lack of desire to compete solely on price. Customer-specific value propositions will be achieved in part by bundling technical expertise, relationships and network influence, communication and consensus-building capabilities, project management and potentially timber brokerage, and in part by modifying existing products and services to address unmet needs. Competitive costs will be an integral part of all value propositions, but cannot be the sole feature. Service excellence is essential, and sets the basis for long-term relationships and customer loyalty.
6.7 Human Resources

It is cliché that “people are our greatest asset”, and that is certainly true for the consulting industry. Labor is the biggest input, and the one most responsible for the creation of value for customers. Everything good happens through the efforts of the people. Conversely, few valued outputs are derived from dissatisfied, disloyal, inexperienced or untrained employees. Employee turnover and the resultant decline in corporate depth threaten organizational readiness and fitness for the environment. The marketing strategy and business purpose described in this project will be unachievable if the human resources (HR) are permitted to degrade. The strategy will collapse because it depends upon diversification, market presence and corporate innovation and organizational competency. A two-pronged HR strategy that shifts the tide of attrition and that captures knowledge that may otherwise be lost is essential. The strategy must be supported with clear, actionable policies. Figure 2.1 highlights the virtual loop that exists between the quality of the HR resources and the performance of the company. Only be strengthening the human resources can the company or the shareholders meet the long-term objectives and succession plans. The relevance of this resource warrants considerable discussion.

Historically, IPAC realized exceptional employee retention. Turnover was so low that some employees felt the organization was stagnant. Opportunities for advancement occurred mostly through growth in new, but typically remote, geographic locations. Few people wanted to relocate, so there was little movement. Wages were also stagnant. The cost-price squeeze in the forestry consulting industry left many consulting companies lagging other industrial sectors in terms of employee compensation. The boom in the economy has allowed other industries to increase base pay rates, while wage increases have been relatively sluggish in the consulting sector. As a result, and in keeping with a broad national trend, turnover has increased significantly at IPAC. In addition to numerous departures from the lower ranks of the organization, the company lost 7 of 9 key project managers over the past two years. These people
were drawn away by higher wages, promotion prospects or the perception of increased job security. In a recent study conducted by the Hay Group: "Why Productive Workers Leave – Seven Suggestions for Keeping Them", it is reported that in the last five years, employee attrition in the US surged by more than 25 percent.

Attrition in the middle layer of the hierarchy has the potential to be very disruptive. Not only does it lead to higher costs, but it also impairs the flexibility that the firm once enjoyed. The company's ability to react to customer demands is constrained. Project Managers developed skills that were marketable to a broad range of customers. A number of reasons contributed to the attrition, most notably; limited opportunities for advancement or personal growth, slow wage movement and unclear vision. Research done by the Hay Group suggests that although the trigger for turnover is often external, such as higher compensation rates, the root cause is usually internal. The most common reasons why the best people stay include:

1. Effective leadership with clear vision, goals and strategy.
2. Opportunity to use skills and abilities, to develop new ones and to advance within the organization.
3. Quality supervision and assistance.
4. Good work environment and equipment.
5. Fair compensation.

Turnover imposes huge consequences that eclipse the mere shortage of manpower with which to expedite projects and earn revenues. The associated loss of corporate memory, loss of relationship capital with customers, decreased morale, increased training costs, decreased efficiency and effectiveness, and increased administrative costs are far more significant. Research indicates that 79% of the cost of turnover is productivity related. In determining the cost of turnover, and any solution thereto, both the expense line and revenue line must be evaluated. Cost is not the primary reason for creating a turnover remedy. In IPAC’s case, the revenue line is equally important. The quality of human resources drives sales success. The need to develop supportive HR policies is as much top-line driven as it is bottom line driven.
6.7.1 Retention/Recruitment

A multi-faceted strategy is required to address retention and recruitment. The strategy must address four components of the work environment: emotional, psychological, physical and monetary. If the components are managed consistent with the needs of the employee group, the employer is regarded as an 'employer of choice'. Workers move toward employers of choice, and tend to stay with them as long as their needs continue to be met. Obviously, it is not possible to create a separate environment for each individual, so it is important that once a blend or culture is established, that people be hired only if they fit the culture.

Organizational commitment: The HR Representative will be accountable for the implementation of this strategy, but responsibility will be organizational. All levels of the organization will be engaged and held accountable.

Understanding Employee Needs: The Gallup organization developed a workplace research tool, the Gallup Q12 questionnaire, which has been used by other organizations to address HR status. The survey is based on hundreds of thousands of employees across numerous industries. The 12 questions measure employee engagement, and have been consistently correlated to retention, productivity, profitability, customer satisfaction and workplace safety:

**Gallup's Q12:**

1. Do I know what is expected of me at work?
2. Do I have the materials and equipment I need to do my work right?
3. At work, do I have the opportunity to do what I do best every day?
4. In the last seven days, have I received recognition or praise for good work?
5. Does my supervisor, or someone at work, seem to care about me as a person?
6. Is there someone at work who encourages my development?
7. At work, do my opinions seem to count?
8. Does the mission/purpose of my company make me feel like my work is important?
9. Are my co-workers committed to quality work?
10. Do I have a best friend at work?
11. In the last six months, have I talked with someone about my progress?
12. At work, have I had opportunities to learn and grow.
Compensation. Most research agrees that money is not a motivator. Moreover, money does little over the long-term to retain workers. At best, it has a short-term impact on the morale of individuals that receive a pay increase. Compensation must be competitive within the served market. The essential benchmark questions include; are rates at market or below for tenured employees, and are rates at market or below for new hires? Overall, if the company is an ‘employer of choice’, then lower rates of pay may be tolerated by employees.

Training: Training must be conducted with purpose. Training for the sake of training is neither useful nor appreciated by anyone. It should prepare the person for what will be expected in the context of their job. Employees need to feel that the new knowledge or skills is something that they will be accountable to, rewarded for and that will support their advancement. Strategic training will demonstrate job importance and alignment with the organization as a whole. Key values such as professionalism, job quality, customer service, teamwork and accountability must be addressed with each training effort. It is imperative that training investments support the corporate objectives. Employees at all levels must be aware of their contribution.

Training always represents an opportunity to increase organizational depth and breadth. The same level of importance must be placed on all levels of training to instill accountability into the culture. Soft training such as on the job training and mentoring must follow the same principles. Post-training debriefing will highlight the corporate and personal benefits.

Supervision: Gallup research indicates that “70 percent of employees quit their manager, not their company”. Like customers and shareholders, employees have needs as well. Satisfied employees have less incentive to leave. Employees appreciate genuine interest, and use it to measure ‘corporate commitment’. They desire training, development, resources, tools and technology. They also want to be seen and treated as valuable to the institution. Several specific actions contribute to how employees perceive corporate commitment:
1. Recognition for merit, work effort and other contributions
2. Timely performance feedback, scheduled commitments
3. Career progression and promotion
4. A culture that values direct communication and teamwork
5. Clear direction, objectives and expectations for their work
6. Positive, upbeat, fun environment that celebrates success and evaluates failure
7. Positive customer responses
8. Effective processes to deal with employee issues
9. Flexibility in work hours
10. Recognition of the work versus home life balance
11. Elimination of people that consistently underachieve relative to expectations
12. Clear job expectations and regular reviews
13. A comfortable and safe work environment
14. Zero tolerance on harassment
15. Clearly defined corporate values that are consistently applied
16. Engagement in matters that affect the workplace and work experience

To attract and retain people, the best organizations:

1. Take a strategic approach.
2. Plan and expect an acceptable return on investment (ROI).
3. Provide compelling reasons why employees would want to be part of the organization.
4. Look to satisfy the personal and practical needs of the employee.
5. Operationally behave in a way that demonstrates the value of each employee.
6. Execute management processes that provide daily engagement and advancement.
7. Provide focused reward and recognition.
8. Take action on the unacceptable, dealing equally with technical and behavioral deficiencies.

6.7.2 Employee Motivation

HR strategy is cross-functional. Strategies that improve retention and recruitment will also improve employee motivation. “Engineer Live” lists several important non-financial motivators: advancement, autonomy, civilized treatment, employer commitment, environment, exposure to senior people, praise when due, support when needed, challenge/creativity, being trusted, working for a winning team, useful assignments, and work/life balance. Overall, motivation is a function of mutual respect and engagement, performance feedback and reward. The key is to make people want to give their best, not to set up structure and process that constrains them. Employees at all levels respond to engagement. A ten-point plan is proposed;
1. Senior management makes a public statement of commitment stressing the importance of talent and the need to develop good HR skills.
2. Ensure all managers understand the linkages between the human resources and the marketing strategies, and how to win in the marketplace.
3. Treat every member of the staff as an individual. Understand their needs and work to meet them.
4. Support and coach managers in people management skills.
5. Conduct regular Q12 surveys to test perceptions and efficacy of HR program.
6. Hire only people that fit the culture.
7. Establish trust and a sense of management competence. Avoid ‘hire and fire’ mentality.
8. Commit to employee development so that their value and utility increases.
9. Challenge any reasons for not being flexible and responsive to employee needs. Draft flexible policies.
10. Identify the core talent and invest in those individuals, but develop the others as well.

A company that is less dependent on rules, hierarchy and tradition, and more attuned to performance, creativity and innovation is naturally positioned to succeed where others will struggle.

6.7.3 Knowledge and Relationship Capital

Employee attrition is inevitable. The best strategy, diligently and thoughtfully implemented will not hold every employee. People leave for a variety of reasons, not all related to their work or the workplace. When employees leave, important knowledge and relationships are lost. Knowledge continuity between employee generations, and relationship continuity with customers, suppliers and even competitors is essential. Beazley, who coauthored Continuity Management: Preserving Corporate Knowledge and Productivity When Employees Leave, stated that “knowledge is the new capital, but it’s worthless unless it’s accessible, communicated and enhanced”. In the consulting sector, relationships fall into a similar category. This is especially true where marketing strategies hinge on relationship marketing. A program is necessary to offset the impact of employee turnover.

A “Knowledge Profile”, tracked with the support of information technologies, creates an important link between employee generations. Each profile describes critical operational knowl-
how required to do a particular job. The information is presented in the form of a questionnaire that is linked to a job description. Key relationship information is contained in a separate section dealing specifically with customer, supplier, or network communications. Key points are contained in the database, which must be updated routinely. The maintenance of the database is an expectation of all employees. The key is to start small, and build the knowledge pool over time. Structure and architecture allow the data to be accessed sensibly when it is needed.

Beazley recommended that each profile consist of four sections; current operating data, operational knowledge, basic operational knowledge and background knowledge. A separate data pool is required for relationship-specific knowledge. Key pressure points, idiosyncrasies, opportunities, preferences and expectations are stated in consistent language, again, sensibly and consistently arranged for ease of access. It is recommended that the relationship value be extended into the organization via joint meetings, especially with customers. The goodwill of relationships must extend into the organization whenever possible. Obviously, the culture must enforce the mutual benefits of passing on personal goodwill.

The value of motivated employees and knowledge transfer will be vital to long-term marketing strategies. Motivation leads to innovation and productivity. Relationship-centric markets make knowledge and relationship continuity essential. Productivity, innovation, knowledge and relationships are the key components of the human resources that make it mission-critical.

6.8 Critical Success Factors/Key Performance Indicators

Benchmarking of organizations which are “recognized for exemplary performance” is an established means of assessing performance. There are four main types of benchmarking:

internal, external, competitive and non-competitive. Benchmarking facilitates continuous improvement if managers can; 1) decide what to benchmark, 2) identify whom to benchmark, 3) plan and conduct investigations, 4) determine the performance gap, 5) project future performance levels, 6) communicate findings and gain acceptance, 7) revise performance goals, 8) develop new action plans, 9) implement actions and 10) recalibrate benchmarks. Unfortunately, it is exceedingly difficult to benchmark competitors in the forestry consulting industry. Firms are not willing to divulge information. Most benchmarking is done by interviewing new hires that recently left a competitor, or through customer feedback.

Table 6.1 and Table 6.2 define mission-critical success factors for the new marketing strategy. Benchmarking at the KPI level is not possible. Benchmarking is possible related to; 1) the ability to win consulting assignments, 2) service excellence on competitive priorities, 3) customer satisfaction, and 4) the ability to create core competencies. The investigation must be done cautiously to avoid alerting competitors.

The ability of the firm to win assignments can be deduced by its relative ranking in contract tenders. Consistently scoring in the 3 leading bids reflects efficiency and productivity. Additionally, the number of direct award contracts indicates marketing success. Service excellence will be benchmarked through aftermarket meetings with customers. A survey will be used to rank performance. Service excellence will be inferred from an excellent rating on the three most important competitive priorities identified by the customer.
### Table 6.1 The Internal Business Perspective

<table>
<thead>
<tr>
<th>Goal:</th>
<th>Critical Success Factor:</th>
<th>Key Performance Indicator and Target:</th>
</tr>
</thead>
</table>
| To excel at winning preferred consulting assignments. | **Relationship Marketing:** To build customer relationships by understanding needs and priorities.  
**Customer loyalty:** To generate earn opportunity to bring solutions. | **Primary Relationship Marketing KPI** = competitive priorities ranked prior to job commencement. Target = 100% of pre-work meetings rank customer priorities.  
**Secondary Relationship Marketing KPI** = completed post-project customer survey. Target = 100% post-project surveys complete, with any deficiencies addressed.  
**Loyalty KPI** = % of gross sales awarded through negotiation rather than tender. Target = 50% of gross sales received through direct award. |
| To excel at consulting process efficiency and effectiveness. | **Service excellence:** Lead time, quality, cost and overall performance.  
**Human resources:** Employee retention, recruitment and motivation. | **Service excellence KPI** = deadlines, on budget, quality to specifications and performance as expected. Target = 100% of deadlines met, costs 100% on budget, quality at 0% defect and overall performance rated as "excellent" in survey.  
**Human Resources KPI** = proportion of satisfied employees. Target = 75% satisfied rating on internal employee (Q12) survey. |
Table 6.2 The Innovation and Learning Perspective

<table>
<thead>
<tr>
<th>Goal: To create core capabilities which add value for customers faster than competitors.</th>
<th>Critical Success Factor:</th>
<th>Key Performance Indicator and Target:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process &amp; technology innovation</strong>: commitment to exploring new ideas, processes, methodologies, and technologies. <strong>Teamwork</strong>: improves critical thinking corporate learning and memory. <strong>Effective training</strong>: adds skills, organizational depth and accountability. <strong>Network alliances</strong>: add depth, capacity, flexibility &amp; market access.</td>
<td><strong>Innovation KPI</strong> = the proportion of service offerings with ≤ 2 direct competitors. Target = ≥10% services with ≤ 2 direct competitors. <strong>Teamwork KPI</strong> = % of projects involving ≥ 3 departments in the consulting services. Target = ≥ 50% of projects involve ≥ 3 departments. <strong>Training efficacy KPI</strong> = % of training dollars that are on strategy. Target = 100% of skills training investments to be consistent with preferred strategy. <strong>Network KPI</strong> = % of gross sales in collaboration with external alliance partners. Target ≥ 10% of gross sales derived from strategic alliances.</td>
<td></td>
</tr>
<tr>
<td>To become an effective learning organization.</td>
<td><strong>Effective performance measures</strong>: reveal if operations and processes are congruent with strategy. <strong>Supportive information Technology (IT)</strong>: provide real-time feedback that drives performance and continuous improvement. <strong>Effective strategies</strong>: via shared responsibility for strategy development, effective strategy dissemination, corporate commitment to planning processes and strategy. <strong>Knowledge profiles</strong>: to lock in corporate memory.</td>
<td><strong>Performance measures efficacy KPI</strong> = % of performance measures used to evaluate performance and change processes. Target ≥ 75% of measures influence decisions within 6 months. <strong>IT support system efficacy KPI</strong> = % of system users that access the system and interpret the data. Target = ≥ 75% of target users know the system and routinely access and report data within 6 months. <strong>Strategic planning efficacy KPI</strong> = % of staff understanding the strategic direction, what their role is, who is accountable, and how and when we will determine ‘success’. Target = 100% of staff to answer all questions correctly. <strong>Knowledge profile KPI</strong> = % of staff that have completed job description, and % of staff that have completed process description. Target = 100% of staff positions covered with Job Description, and 100% of jobs with Process Description.</td>
</tr>
</tbody>
</table>
7 SENSITIVITY ANALYSIS

The performance of the company is highly sensitive to modest changes in revenues, cost of goods sold and administration expenses. The relative change in revenues versus the cost of goods sold reflects two key elements – the pricing strategy and employee productivity. Other cost items such as vehicle expenses are a factor, but the relative weight of the labor input overshadows the other inputs. Three scenarios were run to explore the financial sensitivity of the company to the proposed marketing strategy. The scenarios include a ‘base case’, a ‘worst case’ and a ‘best case’. The prescribed marketing strategy calls for a gradual shift into higher margin markets in the ‘First Nations’ and ‘Private’ market segments, both with existing and modified services. Supportive HR policies will promote employee motivation and productivity gains. The 2006 year is forecast because year-end statements were not yet available. The forecast draws heavily from the year-to-date performance. The 2006 year is the benchmark for each scenario because it is considered to be too late to affect the outcome for the year with any revised marketing strategy.

7.1 ‘Base Case’ Analysis

7.1.1 ‘Base Case’ Assumptions

The ‘base case’ models a shift of about 25% of the annual sales over the next four years into projects that generate a net return exceeding 12%. In addition, it is assumed that customer profiling will filter out chronically under-performing projects and operations, but some low margin contracts are retained in order to support other corporate objectives. It is further assumed that the HR issues will stabilize, but employee productivity will remain similar each year. Any improvement in gross margin is the direct result of pricing changes and not employee productivity gains. The increasing cost of goods sold (COGS) reflects rising input costs. Modest
increases in training and marketing drive selling, general and administration (SG&A) costs up by 5% each year. Table 7.1 shows the assumptions used for the ‘base case’ analysis.

Table 7.1 Assumptions Used for the ‘Base Case’ Forecast

<table>
<thead>
<tr>
<th>Income Statement:</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Growth</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Increase in COGS</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Increase in SG&amp;A</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Change in Interest Income</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Capital Investment</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Accounts Receivable</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Accounts Payable</td>
<td>0%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Change in Inventory</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Change in Work in Progress</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Balance Sheet:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Accounts Receivable</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Accounts Payable</td>
<td>0%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Change in Inventory</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Change in Work in Progress</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

7.1.2 ‘Base Case’ Results

The financial results for the ‘base case’ are positive relative to the performance observed in 2006. Table 7.2 includes key financial highlights for this scenario. EVA@ jumps to 13.8% in 2007 from 6.1% in 2006, and increases steadily to 36.9% in 2010. Beyond that, it is questionable whether the base assumptions will hold true. It is unlikely that the terminal value growth will exceed 3%. EVA@ projections beyond 2010 require revised growth assumptions.

Table 7.2 Key Performance Highlights and Ratios for the ‘Base Case’

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Margin (%)</td>
<td>35.0</td>
<td>36.2</td>
<td>37.5</td>
<td>38.6</td>
<td>39.8</td>
</tr>
<tr>
<td>Net Income ($)</td>
<td>21,000</td>
<td>88,000</td>
<td>159,660</td>
<td>236,260</td>
<td>318,095</td>
</tr>
<tr>
<td>EBITDA ($)</td>
<td>240,000</td>
<td>302,000</td>
<td>368,660</td>
<td>440,260</td>
<td>517,095</td>
</tr>
<tr>
<td>Net Profitability (%)</td>
<td>0.5</td>
<td>2.1</td>
<td>3.6</td>
<td>5.1</td>
<td>6.5</td>
</tr>
<tr>
<td>EVA@ ($)</td>
<td>63,722</td>
<td>136,712</td>
<td>208,372</td>
<td>284,972</td>
<td>366,807</td>
</tr>
<tr>
<td>EVA@ (%)</td>
<td>6.1</td>
<td>13.8</td>
<td>21.0</td>
<td>28.7</td>
<td>36.9</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>2.1</td>
<td>8.0</td>
<td>16.1</td>
<td>23.8</td>
<td>32.0</td>
</tr>
<tr>
<td>RONA (%)</td>
<td>14.9</td>
<td>21.5</td>
<td>28.6</td>
<td>36.2</td>
<td>44.3</td>
</tr>
<tr>
<td>Net Asset Turnover</td>
<td>4.0</td>
<td>4.2</td>
<td>4.4</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>EBIT Margin (%)</td>
<td>3.8</td>
<td>5.2</td>
<td>6.6</td>
<td>7.9</td>
<td>9.2</td>
</tr>
<tr>
<td>Receivable Days</td>
<td>52.8</td>
<td>50.3</td>
<td>47.9</td>
<td>45.6</td>
<td>43.4</td>
</tr>
<tr>
<td>Payable Days</td>
<td>16.9</td>
<td>18.0</td>
<td>19.2</td>
<td>20.5</td>
<td>21.9</td>
</tr>
</tbody>
</table>
Profitability in 2006 is forecast to be very close to breakeven at 0.5%, but increases approximately 1.5% each year thereafter. Although this change appears rather small, it amounts to a substantial improvement in absolute dollars over the five year period. Return on equity (ROE) improves significantly to 32.0% from 2.1% in 2006. RONA also improves as a result of improved EBIT Margin. The changes in accounts receivable and accounts payable shown in Table 7.3 are minimal. The change in working capital composition over the five year forecast period are minor; however, the negative cash position in 2009 and 2010 are a concern. The cash shortage will require additional capital investment by the shareholders to finance the growth of the company. Working capital turnover shows steady improvement and increases almost 20% over the next four years from 2006.

Table 7.3 Working Capital Composition for the ‘Base Case’

<table>
<thead>
<tr>
<th>Working Capital Turnover</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital: ($)</td>
<td>925,495</td>
<td>934,495</td>
<td>940,895</td>
<td>944,935</td>
<td>946,879</td>
</tr>
<tr>
<td>Cash</td>
<td>2.4%</td>
<td>1.4%</td>
<td>0.0%</td>
<td>(1.8%)</td>
<td>(4.0%)</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>62.5%</td>
<td>61.9%</td>
<td>61.5%</td>
<td>61.2%</td>
<td>61.1%</td>
</tr>
<tr>
<td>Inventory &amp; Work in Progress</td>
<td>22.2%</td>
<td>22.6%</td>
<td>23.1%</td>
<td>23.7%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>13.0%</td>
<td>14.1%</td>
<td>15.4%</td>
<td>16.9%</td>
<td>18.6%</td>
</tr>
</tbody>
</table>

7.2 ‘Best Case’ Analysis

7.2.1 ‘Best Case’ Assumptions

The ‘best case’ scenario incorporates a shift of about 40% of the annual sales over the next four years into projects that generate a net return of about 15%. The rest of the projects continue to yield an average net return of about 5%. Similar to the ‘base case’, it is assumed that customer profiling will filter out under-performing projects and operations, but fewer low margin contracts are retained. Instead, they are replaced with higher margin contracts. Staff size does not grow - the increase in COGS reflects increased input costs for payroll and vehicles. Increased investment in HR results in a productivity gain in 2007 of about 7%. Increased investment in
training drives administration costs up by 7% each year. Market growth is highest in 2007, but shows a decline over the next three years reflecting a market saturation effect. The improvement in gross margin is the result of both pricing changes and employee productivity gains. Table 7.4 shows the assumptions used for the ‘best case’ analysis. Interestingly, the performance forecast for 2007 is very similar to the results achieved in 2005. The sales spike in 2005 was associated with higher margin projects undertaken with First Nations, which is the marketing basis of the ‘best case’ scenario. This attests to the validity of the scenario, as well as the incremental gains used in the ‘best case’ scenario.

Table 7.4 Assumptions Used for the ‘Best Case’ Forecast

<table>
<thead>
<tr>
<th>Income Statement:</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Growth</td>
<td>0%</td>
<td>12%</td>
<td>12%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Increase in COGS</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Increase in SG&amp;A</td>
<td>0%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Change in Interest Income</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Capital Investment</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Balance Sheet:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Accounts Receivable</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Accounts Payable</td>
<td>0%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Change in Inventory</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Change in Work in Progress</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

7.2.2 ‘Best Case’ Results

The results are very positive relative to the ‘base case’ scenario, although there is limited separation between the two in 2007. Table 7.5 shows the financial highlights for the ‘best case’ scenario. EVA® jumps to 34.3 % by 2007 and increases steadily to 90.6 % in 2010. Again, beyond 2010, it is questionable whether the base assumptions will hold true.
Table 7.5  Key Performance Highlights and Ratios for the ‘Best Case’

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Margin (%)</td>
<td>35.0</td>
<td>39.1</td>
<td>42.9</td>
<td>44.5</td>
<td>45.0</td>
</tr>
<tr>
<td>Net Income ($)</td>
<td>21,000</td>
<td>292,000</td>
<td>608,220</td>
<td>775,131</td>
<td>851,877</td>
</tr>
<tr>
<td>EBITDA ($)</td>
<td>240,000</td>
<td>506,000</td>
<td>817,220</td>
<td>979,131</td>
<td>1,050,877</td>
</tr>
<tr>
<td>Net Profitability (%)</td>
<td>0.5</td>
<td>6.5</td>
<td>12.1</td>
<td>14.3</td>
<td>14.8</td>
</tr>
<tr>
<td>EVA © ($)</td>
<td>63,722</td>
<td>340,712</td>
<td>656,932</td>
<td>823,843</td>
<td>900,589</td>
</tr>
<tr>
<td>EVA © (%)</td>
<td>6.1</td>
<td>34.3</td>
<td>66.1</td>
<td>82.9</td>
<td>90.6</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>2.1</td>
<td>29.4</td>
<td>61.2</td>
<td>78.0</td>
<td>85.7</td>
</tr>
<tr>
<td>RONA (%)</td>
<td>14.9</td>
<td>41.7</td>
<td>73.0</td>
<td>89.5</td>
<td>97.1</td>
</tr>
<tr>
<td>Net Asset Turnover</td>
<td>4.0</td>
<td>4.4</td>
<td>5.0</td>
<td>5.4</td>
<td>5.7</td>
</tr>
<tr>
<td>EBIT Margin (%)</td>
<td>3.8</td>
<td>9.4</td>
<td>14.7</td>
<td>16.7</td>
<td>17.1</td>
</tr>
<tr>
<td>Receivable Days</td>
<td>52.8</td>
<td>47.1</td>
<td>42.1</td>
<td>39.0</td>
<td>36.8</td>
</tr>
<tr>
<td>Payable Days</td>
<td>16.9</td>
<td>18.5</td>
<td>20.2</td>
<td>22.1</td>
<td>24.2</td>
</tr>
</tbody>
</table>

With the ‘best case’ scenario, profitability increases 6% from 2006 to 2007, then jumps a further 5.6% in 2008. After 2008 the profitability increases more slowly due to the saturation effect on the market. The gain in absolute dollars is even more pronounced, increasing from $21,000 in 2006 to $851,877 in 2010. The additional $830,000 leaves considerable latitude to share the incremental earnings with the employees, and to further promote the company as an ‘employer of choice’. ROE improves significantly to 85.7%. RONA also improves to a high of 97.1% on 2010, driven again by huge gains in EBIT Margin. Table 7.6 shows that the relative changes in accounts receivable and accounts payable are more pronounced and more favourable than in the ‘base case’. Working capital turnover is also slightly higher than in the ‘base case’. Furthermore, the cash deficit in 2009 and 2010 is avoided.

Table 7.6  Working Capital Composition for the ‘Best Case’

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital Turnover</td>
<td>4.3</td>
<td>4.7</td>
<td>5.2</td>
<td>5.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Working Capital: ($)</td>
<td>925,495</td>
<td>946,495</td>
<td>967,895</td>
<td>990,505</td>
<td>1,015,257</td>
</tr>
<tr>
<td>Cash</td>
<td>2.4%</td>
<td>2.2%</td>
<td>1.8%</td>
<td>1.2%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>62.5%</td>
<td>61.1%</td>
<td>59.8%</td>
<td>58.4%</td>
<td>57.0%</td>
</tr>
<tr>
<td>Inventory &amp; Work in Progress</td>
<td>22.2%</td>
<td>22.1%</td>
<td>22.0%</td>
<td>22.0%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>13.0%</td>
<td>14.6%</td>
<td>16.4%</td>
<td>18.4%</td>
<td>20.7%</td>
</tr>
</tbody>
</table>
7.3 ‘Worst Case’ Analysis

7.3.1 ‘Worst Case’ Assumptions

The ‘worst case’ scenario is a pessimistic version of the status quo business option. The status quo option is expected to generate results that are similar to, or worse than, 2006. An eventual inability to generate EVA makes the status quo option a cost to the shareholders; therefore, it is not sustainable. This scenario models an increasing price squeeze with limited sales growth of 1% and higher costs of goods sold and administration costs. The benchmark is 2006, which is forecasted to be close to breakeven. The performance declines steadily from 2007 to 2010. The scenario shows a business that rapidly becomes insolvent. The business does not earn economic rents after 2007, and by the end of 2008, shareholder value is eroded by $28,308. There is little analysis to do on this scenario because it calls for winding the business down in 2007 to preserve existing shareholder equity. In this scenario, the increases in cost of goods sold and in administration costs reflect an inability to hold costs down or to motivate staff. Productivity steadily declines. Moreover, the scenario models an inability to manage working capital. Table 7.7 shows the assumptions used for the ‘worst case’ analysis.

Table 7.7 Assumptions Used for the ‘Worst Case’ Forecast

<table>
<thead>
<tr>
<th>Income Statement:</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Growth</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Increase in COGS</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Increase in S,G&amp;A</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Change in Interest Income</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Change in Capital Investment</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Balance Sheet:</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Accounts Receivable</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Change in Accounts Payable</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Change in Inventory</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Change in Work in Progress</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>
7.3.2 ‘Worst Case’ Results

The results are very worrisome given the breakeven position in 2006. The company lacks resilience. Table 7.8 shows the financial highlights for the ‘worst case’ scenario. EVA @ jumps to 34.3% by 2007 and increases steadily to 90.6% in 2010. Again, beyond 2010, it is questionable whether the base assumptions will hold true.

Table 7.8 Key Performance Highlights and Ratios for the ‘Worst Case’

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Margin (%)</td>
<td>35.0</td>
<td>33.7</td>
<td>32.4</td>
<td>31.1</td>
<td>29.7</td>
</tr>
<tr>
<td>Net Income ($)</td>
<td>21,000</td>
<td>(18,000)</td>
<td>(77,020)</td>
<td>(150,159)</td>
<td>(228,517)</td>
</tr>
<tr>
<td>EBITDA ($)</td>
<td>240,000</td>
<td>166,000</td>
<td>88,980</td>
<td>8,841</td>
<td>(74,517)</td>
</tr>
<tr>
<td>Net Profitability (%)</td>
<td>0.5</td>
<td>(0.5)</td>
<td>(1.9)</td>
<td>(3.6)</td>
<td>(5.5)</td>
</tr>
<tr>
<td>EVA @ ($)</td>
<td>63,722</td>
<td>30,712</td>
<td>(28,308)</td>
<td>(101,447)</td>
<td>(179,805)</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>6.1</td>
<td>3.1</td>
<td>(2.8)</td>
<td>(10.2)</td>
<td>(18.1)</td>
</tr>
<tr>
<td>RONA (%)</td>
<td>2.1</td>
<td>(1.8)</td>
<td>(7.8)</td>
<td>(15.1)</td>
<td>(23.0)</td>
</tr>
<tr>
<td>Net Asset Turnover</td>
<td>14.9</td>
<td>8.0</td>
<td>0.9</td>
<td>(6.6)</td>
<td>(14.3)</td>
</tr>
<tr>
<td>EBIT Margin (%)</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Receivable Days</td>
<td>52.8</td>
<td>52.3</td>
<td>51.8</td>
<td>51.2</td>
<td>50.7</td>
</tr>
<tr>
<td>Payable Days</td>
<td>16.9</td>
<td>18.8</td>
<td>21.0</td>
<td>23.5</td>
<td>26.2</td>
</tr>
</tbody>
</table>

Under the ‘worst case’ scenario, profitability steadily declines after 2006. Net profitability and ROE are negative for 2007 at 0.5% and 1.8%, respectively. The business shows a net loss of $18,000 for 2007, although EVA @ is still positive due to interest paid on shareholder’s loans. Net operating profits after tax (NOPAT) is $150,000 in 2007 due to a very low corporate tax load. RONA stays positive until 2009, due mostly to steady net asset turnover.

Table 7.9 shows the relative changes in working capital composition as a result of ineffective management modeled in the ‘worst case’ scenario. The proportion of working capital held in Accounts Receivable increases over the five-year period at the expense of Cash. Working Capital Turnover becomes slightly more sluggish over the same period. The lack of Cash will require additional capital investment by 2008, but the failing business is not likely to attract financing.
Table 7.9 Working Capital Composition for the ‘Worst Case’

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital Turnover</td>
<td>4.3</td>
<td>4.3</td>
<td>4.2</td>
<td>4.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Working Capital: ($)</td>
<td>925,495</td>
<td>946,495</td>
<td>967,895</td>
<td>990,505</td>
<td>1,015,257</td>
</tr>
<tr>
<td>Cash</td>
<td>2.4%</td>
<td>(0.9%)</td>
<td>(4.8%)</td>
<td>(9.5%)</td>
<td>(14.9%)</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>62.5%</td>
<td>64.6%</td>
<td>67.1%</td>
<td>70.0%</td>
<td>73.4%</td>
</tr>
<tr>
<td>Inventory &amp; Work in Progress</td>
<td>22.2%</td>
<td>22.7%</td>
<td>23.3%</td>
<td>24.1%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>13.0%</td>
<td>13.7%</td>
<td>14.5%</td>
<td>15.4%</td>
<td>16.4%</td>
</tr>
</tbody>
</table>

7.4 Succession Implications

The preceding analysis demonstrated a very high degree of sensitivity to minor adjustments in sales, productivity and key costs. Efforts to manage working capital composition will enhance the distribution of working capital over time. The key observation in this analysis is that a consistent effort over a few years produces dramatic changes. The ‘base case’ shows the company as viable and sustainable, with only limited success shifting into the prescribed market segments. In contrast, the ‘best case’ generates much better results despite having higher costs across the board. The performance in 2006 is correlated with a shift in market segments served relative to prior years. Table 7.1, which includes excerpts from Table 5.1, shows the actual market segments served over the past three years. The increase in sales in the government sector came at the expense of an associated drop in First Nations and Licensee sales. The ‘best case’ and ‘base case’ scenarios entail a reversal of this sales mix. Activity in the Private market segment increased in 2006 based on new mining projects and additional oil and gas projects; however, the contribution was too small to have much impact on the bottom line.

Table 7.10 Sales Segmentation for the Past Three Years

<table>
<thead>
<tr>
<th></th>
<th>Licensee</th>
<th>Government</th>
<th>First Nations</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BCTS</td>
<td>Other</td>
<td>Forestry</td>
<td>Business</td>
</tr>
<tr>
<td>2004</td>
<td>18.2</td>
<td>35.2</td>
<td>7.5</td>
<td>28.4</td>
</tr>
<tr>
<td>2005</td>
<td>31.8</td>
<td>36.5</td>
<td>7.8</td>
<td>14.5</td>
</tr>
<tr>
<td>2006</td>
<td>27.4</td>
<td>44.2</td>
<td>7.1</td>
<td>6.9</td>
</tr>
</tbody>
</table>
Succession options are not fully explored within this project. The immediate problem focused on developing an appropriate business option and marketing strategy, as well as supportive human resources policies with which to establish a platform for succession planning. Two primary succession options have been identified at this time by the shareholders, including an option to sell the company or to pass it on to new management while maintaining passive ownership and drawing dividends over time. Prospective buyers include the employees, competitors, strategic investors looking for market access and new competencies, or financial investors interested in the leverage points available through the company. The three scenarios explored in the sensitivity analysis provide a crude glance at how the value of the company might change according to financial drivers; specifically, EBITDA. The worst case scenario rapidly yields a company that is no longer salable. In that instance, winding the company down becomes the only viable option to preserve the existing shareholder assets. In contrast, both the ‘base case’ and the ‘best case’ yield sustainable economic rents and improved sale value. This project does not address the pros and cons of the various sale options, but any decision to sell the company would be tempered by intrinsic factors similar to those stated in Section 6.1.1.2. Table 7.11 shows the relative valuation of the company for the three scenarios. The value is crudely derived using a 5 times EBITDA multiplier. The value of the company, given the three scenarios, varies from nothing, if the company fails to generate positive returns, to over five million dollars with results similar to what was achieved in 2004 and 2005.

<table>
<thead>
<tr>
<th>Table 7.11 Approximate Valuation for Sale Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>'Base Case' EBITDA ($)</strong></td>
</tr>
<tr>
<td><strong>2006</strong></td>
</tr>
<tr>
<td>'Best Case' EBITDA ($)</td>
</tr>
<tr>
<td>Company Value* ($ million)</td>
</tr>
<tr>
<td>'Best Case' EBITDA ($)</td>
</tr>
<tr>
<td>Company Value* ($ million)</td>
</tr>
<tr>
<td>'Worst Case' EBITDA ($)</td>
</tr>
<tr>
<td>Company Value* ($ million)</td>
</tr>
</tbody>
</table>
8 CHANGE CONSIDERATIONS

Navigating a rugged fitness landscape requires short-term pain to achieve long-term gain. The main forces driving the need for change are competitive and macro-determinant. Financial performance is stagnant and human resource concerns threaten the ability of the firm to meet its objectives. Prosperity and growth depend upon the ability to retain, attract and motivate people, and the ability to win preferred markets. The organization is poised, but changes are required.

Resistors to change typically occur on four levels – organizational, functional, group and individual. IPAC is prepared on all levels, especially at the group and individual level. The culture supports change and the people are excited about new opportunities at the personal level. Change has been the norm. Turnover has induced a sense of chaos, and people are looking for vision. Timing is good and the company is positioned well with its organizational and technical capabilities. There is a high degree of congruence between the markets and the organization.

The implementation strategy addresses eight common errors that impede change:

1) There is a collective sense of urgency within the organization.
2) A powerful guiding coalition already exists with the principals, Operations Managers, Senior Business Analyst, Office Manager and HR Representative.
3) A compelling vision exists, with advantages to the owners, employees and customers.
4) The coalition will communicate with and engage all levels of the organization with a shared sense of purpose and renewed ‘organizational commitment’ to human resources.
5) Obstacles and contingencies are understood. Weaknesses and threats will be monitored.
6) KPI targets that are met will be celebrated openly.
7) “Success” will be measured over a two year period to give the marketing strategy time to produce results.
8) The principles will be applied consistently, with clear accountabilities.
The dynamics of the company have been loosely correlated with the careers of the two owners, but if the company is to survive in the long-term, a succession plan must be developed. All succession plans require that the company remain solvent. As importantly, fulfillment of the corporate objectives also requires that the company perform optimally. The strategy presented in this project is predicated on a central business purpose that finds congruence in the needs of the shareholders, customers and employees. The chosen strategy suits a dynamic environment and tightening industry. ‘Selective flexibility’ is essential, and is accomplished by leveraging existing core competencies and by creating an organization and culture that prioritizes innovation, corporate learning and relationships-marketing. An innovation-ecosystem emerges out of a continuous improvement platform that allows the company to evolve and generate sustainable shareholder value.

Although this initiative is expected to improve performance, the real benefit is in developing a process for organizational learning. It is apparent that new ways of thinking are required to break old paradigms. Albert Einstein stated, “The world we have created today as a result of our thinking thus far has created problems that cannot be solved by thinking the way we thought when we created them”\(^\text{13}\). The true organizational advantage of the initiatives outlined in this project is hidden behind our immediate goal of changing the proportion of sales derived from higher margin markets so as to improve performance. The real essence of sustainable shareholder value is couched within the quality of the human resources in the company. The process of developing ourselves as a team, marketing group, innovators and as a learning organization will be ongoing. Only by mastering the people skills will the company be able to unlock opportunities in the future.

9.1 Works Consulted


Markus, E. *Kamloops This Week*. Kamloops, BC: Newspaper Article, 6, Sunday, October 8, 2006.


### 9.2 Internet Sources


