

Adaptation Case Study #1: Frontiers North Adventures

SECTOR: TOURISM

Location: Churchill, Manitoba

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Introduction

John Gunter, chief executive officer of Frontiers North Adventures, was listening carefully to the news on an early Monday morning in fall 2014. Sea ice on Hudson Bay would form a few days later that year, continuing a pattern over the last 30 years. For most people, that news would not affect their everyday activities. But for polar bears, which depend on sea ice as a platform from which to hunt, eat and mate, these changes are significant. And for an organization that features as one of its flagship products an adventure trip in an area home to one of the densest aggregations of polar bears in the world, changing sea-ice formations pose a critical business risk.

“Where we operate, we experience climate change first-hand: not somewhere buried deep down in our supply chain but actually on the frontline of our operations,” said Gunter.

Background on Frontiers North Adventures

Frontiers North Adventures (FNA) is a family business that has operated in Canada’s North for three decades, delivering services to travellers from around the world. FNA’s programs are designed for small groups with specific interests in experiential travel, photography, wildlife, culture and adventure.

Climate change will dramatically affect the business at some point in the future. Whether the impact would happen in five, 10 or 50 years was difficult to predict. But all scientists agreed that, at some point, an increase of ice-free days on Hudson Bay would result in female polar bears not having enough time on the ice to reach the critical body mass needed to reproduce.

“If there is a year with dramatically fewer polar bear cubs being born, that is likely going to influence how the government will manage this subpopulation of polar bears. It will affect our ability to do business, or our desire to do business in this specific manner,” explained Gunter. In addition to devastating the Western Hudson Bay subpopulation of polar bears, this catastrophic event could influence FNA’s revenues, customer satisfaction and return on investments.

So, how can FNA face these climate change challenges? Should FNA stay idle or adapt to climate change? If they decide to adapt, what is the best way to proceed? How can the company ensure that they will keep serving their clients? FNA sought to answer these questions when creating their future strategy.

Climate change adaptation strategy in a small to medium enterprise (SME)

Frontiers North Adventures adopted a proactive approach to managing climate change risks by creating an adaptation strategy. Their strategy consisted of two main components: a) optimizing current operations and b) exploring future opportunities.

FNA's climate change adaptation strategy required careful financial planning. Being a small to medium enterprise (SME) meant that cash flow management and forecasting were vital to ensure liquidity and business viability. FNA knew the value of accurate forecasts and had already integrated operational and financial decisions. Since the company's accountants understood and oversaw every aspect of the business operations, this integration benefited decision making. Given the size of the firm, the adaptation strategy was not a lengthy formal document but rather a commitment and way of thinking.

Optimizing Current Operations

FNA's adaptation strategy covered the following operational aspects:

- **Infrastructure investment planning.** FNA's fleet—e.g. vehicles taking clients to the tundra—was aging. The business needed to decide how best to invest in new infrastructure. A reduction in the polar bear population could make the payback period on infrastructure investments unattractive if, for example, the firm operated fewer trips. Gunter assigned the investment challenge to Jennifer Ash, CPA, CMA, VP Finance & Operations. She worked with both FNA's finance and operations teams in a collaborative risk- and probability-based valuation and scenario-planning exercise to develop a set of recommendations for a way forward. During this process, the teams considered the operational and financial risks that FNA would face if certain assets were compromised as a result of environmental events, as well as the likelihood of occurrence. They ran scenarios—such as a shift in sea-ice formation—and conducted both qualitative and quantitative analysis to generate recommendations for a way forward.
- **Delivery planning.** FNA needed to consider physical constraints in delivering services. One constraint was the thickness of the sea ice, especially where vehicles needed to pass. Before any trips, FNA carried out careful

tests by examining ice thickness. Scientific ice charts and reports complemented their tests. FNA accountants also generated “what if” scenarios: if vehicles could not travel over the ice, what alternatives would optimize both the guest experience and profitability?

- **Supply chain planning.** Careful supply chain planning was vital to FNA because they operated a base in Churchill, Manitoba, to which they needed to bring in materials. They had three options for transporting materials: flight, rail or barge. Barge and airfreight are expensive, so FNA relied predominately on rail. That approach ran into problems due to a changing climate. “This past year, the transfer of materials to Churchill by railroad was disrupted for five to six weeks because of changes in the permafrost layer,” explained Ash. “We need to figure out other mechanisms to maintain our supply chain.” FNA examined alternative supply chain options and ran cost-benefit analyses to evaluate their attractiveness.

These decisions have both quantitative and qualitative aspects. By partnering with local suppliers who brought supplies in by barge, FNA can strengthen their relationships with the local community and leverage the community’s surplus capacity. The substantial cost of a barge- or air-based supply chain poses a risk to profitability, but by leveraging the surplus capacity of those already using these supply chains, FNA can create a win-win scenario for both the company and local suppliers, as they collectively share the expense.

- **Forecasting.** FNA worked closely with researchers, scientists and non-profit organizations examining climate change. FNA needs to plan and market trips 18 months ahead, and thus needs to anticipate when ice will form. They also need to take advantage of bears gathering on land. “We do not want to sell trips after the ice has been formed and all the bears have left,” explained Gunter.

Exploring Future Opportunities

Frontiers North Adventures defines themselves as a tourism company rather than a polar bear tourism company. They looked at other opportunities within the province of Manitoba in an effort to diversify their portfolio and adapt to the impact of a changing climate. For example, they considered taking better advantage of a summer product, visiting the thousands of beluga whales in the area, which was growing in popularity.

FNA used scenario-planning exercises to understand and quantify the effects of investing in new products for different destinations, or different products in the same destinations. Each scenario was treated as a new business opportunity, so the finance team modelled the effect of resource shifts, identified necessary investments and infrastructure, created budgets and clarified risks associated with creating new trips and replacing old trips. These scenario-planning exercises aimed to assign hard dollars to each decision's business impacts.

Challenges

FNA's journey to climate change adaptation has faced many challenges, including the following:

- **Uncertainty.** In evaluating different options, FNA did not always have all the desired financial data. They had to determine whether they needed situation-specific numbers or whether they could draw from their experience with other projects. Climate-related changes also posed unpredictable risks. Currently, the government issues licences for two tourism companies to operate in the area and permits for 18 tourist vehicles to approach the bears. FNA possessed 12 of these permits. The permit number is tied to the polar bear population, so FNA had to work with the provincial government to plan for a reduced bear population.
- **Lack of models.** Ash looked for case studies of best practices, or companies facing similar challenges. However, most material in the public domain is about large corporations rather than SMEs.
- **Volatile prices.** FNA needed to estimate pricing volatility related to energy prices, goods and services. Rail line closures led to inflated prices for products and services locally. These forecasts and considerations needed to be analyzed, their impacts identified and decisions made on how to remain profitable.

The Role of Accountants

FNA's finance team had a significant role in adaptation. Accounting skills were used in both aspects of the strategy: quantifying the current operational requirements and investment decisions and evaluating alternative product offerings and future opportunities. By involving the finance team, FNA was better able to understand the financial impact of operational decisions and to ensure that they were optimizing opportunities for success.

The finance team used cost-benefit analyses, forecasting and scenario planning to detail risks and opportunities. Ash described the key accounting competencies that she used: “Gather macro and micro perspectives, assess, run numbers, look at options. Conduct strategic assessment and apply financial rigour. My training has taught me that, although historical data is important in decision-making, you always need to be looking forward, where the organization and operational environment is heading. And maintain a comprehensive understanding of the operational focus of your business. That is critical.”

Ash and the accounting team used the Balanced Scorecard as a tool to measure performance for key strategic drivers such as product mix, retail sales targets, operational efficiency and productivity. FNA emphasizes responsible/sustainable tourism, and a Balanced Scorecard item is “conservation through education.” The company wanted to divert a percentage of their pre-tax profits toward this goal: for example, via a partnership with the non-governmental organization **Polar Bears International** (PBI) to increase education on the wild-life and issues affecting Canada’s North, specifically related to polar bears.

The Future Role of Accountants

In the future, which competencies could companies such as FNA benefit from? When we asked Gunter and Ash for their views, they provided the following insights:

- *Interpreting scientific reports:* Frontiers North Adventures worked closely with researchers, scientists and non-profit organizations looking at climate change. However, they could use more input from their internal teams. Accountants could receive more training in how to digest scientific information and identify report elements applicable to a specific business.
- *Using a climate change assessment framework:* Accountants could use a framework for assessing risks and opportunities of climate change. However, no standardized template exists for such a framework. Both Gunter and Ash emphasized that they find it valuable to read case studies that show how other organizations and accounting teams address specific problems related to climate change.

Challenges	Accountants' Current Role	Accountants' Future Role
<ul style="list-style-type: none"> • Understand ROI for different decisions • Quantify impact from environmental changes 	<ul style="list-style-type: none"> • Cost-benefit analyses • Forecasting • Scenario planning 	<ul style="list-style-type: none"> • Untangling scientific reports • Climate change assessment framework

Case Summary

- *What is the business impact from climate change?*
Climate change will significantly impact FNA's basic tourism product and operations.
- *What is the adaptation strategy?*
FNA's adaptation strategy involves (a) optimizing current operations and (b) exploring future opportunities.
- *What is the current role of accountants?*
Accountants are involved in scenario planning, cost-benefit analyses and interpreting the return on investment of different options.
- *What is the future role of accountants?*
Accountants can interpret scientific reports to communicate the business risks; they can also use a climate change framework in their valuation models.

This case study was written by Sakis Kotsantonis, KKS Advisors, based on interviews with FNA staff.



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