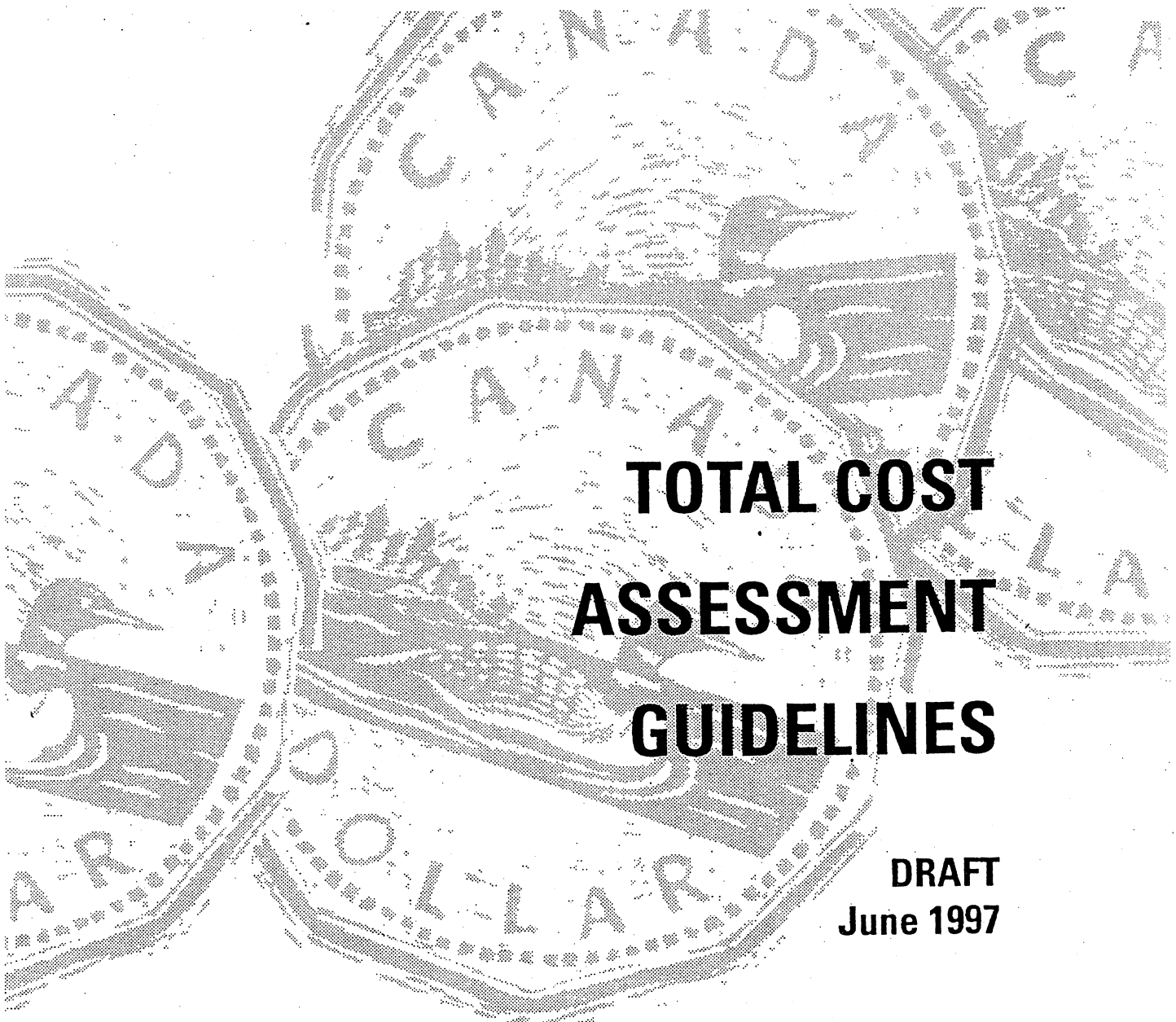


TOTAL COST ASSESSMENT GUIDELINES

DRAFT
June 1997

Preparing the Business Case for Pollution Prevention Projects

Prepared for:

THE BC MINISTRY OF ENVIRONMENT, LANDS & PARKS

ENVIRONMENT CANADA

INDUSTRY CANADA

Prepared by:

COMPASS RESOURCE MANAGEMENT Ltd.

PLANIT MANAGEMENT Inc.

THE SUSTAINABILITY VENTURES GROUP Inc.

Table of Contents

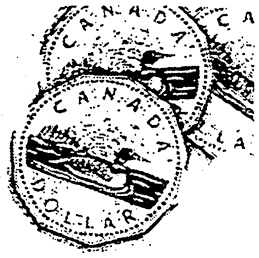


TABLE OF CONTENTS

PART I OVERVIEW

1.	**INTRODUCTION**	1
1.2	Background	1
1.3	Purpose and Objectives	1
1.4	Target Audience and Organization of the Document	2
2.	**OVERVIEW OF TCA**	5
2.3	What is TCA and What is it Used For?	5
2.4	How Does TCA Relate to Other Accounting Approaches?	7
2.5	The Basic Steps	9
	STEP 1 Defining the Decision — Options	9
	STEP 2 Identifying and Understanding Costs	10
	STEP 3 Analyzing Financial Performance	12
	STEP 4 Making the Decision	13
3.	**GETTING STARTED**	15
3.1	Gain Commitment	15
3.2	Conduct Pilot Projects	17
3.3	Form Inter-departmental Team	18
3.4	Improve Cost Information Over Time	20

PART II IMPLEMENTATION

4.	**DEFINING THE DECISION — OPTIONS**	21
4.1	Identifying All Inputs, Processes and Outputs	21
4.2	Assessing Information Needs	23
5.	**IDENTIFYING AND UNDERSTANDING COSTS**	25
5.1	Finding All the Costs	25
5.2	Understanding Relevant Costs	26
5.3	Conducting a Preliminary Assessment	29
6.	**FINDING INDIRECT COSTS**	33
6.1	Cost Allocation	33
6.2	Tracking Down the Data	35
7.	**ASSESSING CONTINGENT AND LESS-QUANTIFIABLE COSTS**	43
7.1	Understanding Contingent and Less-Quantifiable Costs	43
7.2	Identifying Contingent Costs	44
7.3	Characterizing Contingent Costs	46
7.4	Assessing Less-Quantifiable Considerations	58

8.	**ANALYZING FINANCIAL PERFORMANCE**	**61**
8.1	Estimating Incremental Cash Flow	62
	8.1.1 Overview	65
	8.1.2 A Description of Some Common Cash Outflow Items	67
	8.1.3 A Description of Some Common Cash Inflow Items	68
	8.1.4 Capital Cost Allowance (CCA)	69
8.2	Calculating Financial Performance	69
	8.2.1 Choosing A Discount Rate	70
	8.2.2 Calculating Net Present Value (NPV)	71
	8.2.3 Calculating Internal Rate of Return (IRR)	72
	8.2.4 Calculating Payback	73
8.3	Interpreting Financial Indicators	74
8.4	Conducting Sensitivity Analysis	74
9.	**MAKING THE DECISION**	77
9.1	Structuring the Relevant Information	77
9.2	Assessing Portfolios of Options	79
9.3	Conducting Sensitivity and Scenario Analyses	80
9.4	Sequencing and Other Issues	80
9.5	Making a Final Decision	81

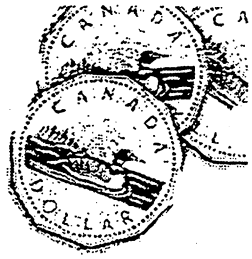
APPENDIX A
Case Study 87

APPENDIX B
Supporting Detail on Financial Performance 101

APPENDIX C
A Form for Conducting an Analysis of Financial Performance 115

APPENDIX D
Directory of Resources 121

APPENDIX E
Glossary of Terms 129



ASSESSING CONTINGENT AND LESS-QUANTIFIABLE COSTS

7.1 Understanding Contingent and Less-Quantifiable Costs

In some cases, changes in direct and indirect cash flows may be sufficient to justify a particular option. However, many options will have less certain or less-quantifiable costs and benefits that could greatly influence their attractiveness. This section summarizes some pragmatic techniques for identifying, characterizing, and evaluating contingent and less-quantifiable costs or benefits.

Contingent costs are broadly defined as any costs which are uncertain or subject to chance. These are sometimes also referred to as *liabilities*. However, in financial accounting, a liability tends to be narrowly defined as an obligation or stated intention to pay. Liabilities are generally recognized in financial statements only where the obligation has already been incurred and is both highly probable and reasonably estimable. Although some costs may be too uncertain to include in a financial statement, they should still be considered in forward-looking managerial decision making. The term contingent cost is used in these guidelines to refer to any uncertain future cost, regardless of its probability or estimability.

Contingent costs may arise from a variety of activities, but are most often related to the management (storage, handing, disposal, or discharge) of inputs and non-product outputs. Less-quantifiable costs are most often strategic in nature, and related to customer relations, employee relations, corporate image, etc. Some examples of contingent and less-quantifiable costs are listed in Figure 5-2.

In many cases, there is not a clear distinction between contingent costs and less-quantifiable costs and benefits. Many less-quantifiable costs eventually give rise to either direct or contingent costs - e.g., poor public image may increase the likelihood regulators will enforce a regulation and levy the maximum penalty.

Furthermore, both contingent costs and less-quantifiable considerations are characterized by uncertainty about their exact nature, probability, timing, and magnitude. Nevertheless, they typically have a monetary value greater than zero and may be crucial to justifying your choice of options.

7

Most companies already recognize other uncertain costs in project evaluation. For example, many include blanket contingencies in large construction projects - sometimes as high as 30% — to account for additional costs they know will arise but which cannot be itemized or quantified exactly. The unique nature of environmental risks and liabilities does not lend itself to this simple approach. However, there are practical techniques for considering these issues in your decision making processes.

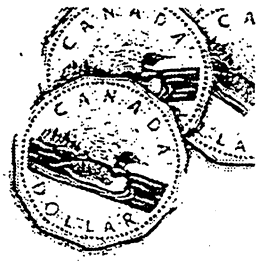
Less-Quantifiable Costs Have Always Been an Important Part of Business Decision Making

Pollution prevention decisions are no different from many other decisions facing most businesses today. Decisions to invest in market share (e.g., through loss leaders), acquire new businesses, develop new products and services, settle labour disputes, or enhance a corporation's image often cannot be justified entirely on the basis of simple financial measures. Financial performance is a key input to these decisions, but so is information on factors such as potential business risks, strategic positioning, and other less quantifiable costs or rewards.

7.2 Identifying Contingent Costs

There is no single correct method for assessing contingent costs. The purpose of this section is to provide a pragmatic approach that can be adapted to your particular decisions.

The most important step in the analysis of contingent costs is identifying those costs that may be prevented or reduced as a result of the option under study.



Here we are interested only in the incremental changes in contingent costs that may make a difference to the evaluation of the option.

For example, in the case of Precision Circuits (Section 4), changes in the wastewater treatment process reduced the number, volume and toxicity of treatment materials and wastes. This, in turn, could decrease potential contingent costs associated with spills during the storage and transportation of residuals (e.g., clean-up costs, production losses, and third-party liability), or exposure to higher managment costs arising from more stringent standards of care over time.[8]

The same process diagrams used to identify changes in direct or indirect costs also provides a useful starting point for identifying potential changes in contingent costs with various options. Some key questions to consider in identifying relevant contingent costs include:

- What are the inputs, and product and non-product outputs at each stage in the process?
- What are the specific management activities associated with each input and product and non-product output (e.g., storage, recycling, treatment, disposal, or discharge)?
- What are the pathways or events by which injury, damage or other contingent costs may arise from these inputs, and product and non-product outputs (e.g., management of spills, leaks, or fires)?

8 These contingent costs were not actually quantified in this case since the direct and indirect cost savings were more than sufficient to justify the cost of wastewater treatment process changes. However, if assumptions about productivity improvements or up-front capital requirements change, the decision could become more sensitive to these contingent costs.

- What and who could be affected - e.g., workers, company property, community members and their property, consumers of the product?

- Will the option prevent or reduce these potential contingent costs?

7

For very complex scenarios, this step may require the involvement of different professionals, including engineers, environmental scientists and lawyers. In particular, identification of some contingent costs requires an understanding of both current and probable future laws, standards, and conditions. However, many contingent costs can be adequately characterized in small firms simply by pooling the management and technical resources on-site.

Externalities

An externality is any positive or negative effect associated with a firm's products, services, or activities that are borne by a third party or the environment, but for which a company is not accountable under existing laws, regulations, or standards. Although not the focus of TCA, some externalities may be included in the analysis as either contingent or less-quantifiable considerations. This may be justified if the corporation believes it could be held accountable for these costs at some future date, either through legal precedents, changes in regulations, shifts in consumer and community values, or new certification standards for products and suppliers. A proactive corporate policy may also support consideration of certain externalities in the analysis. This may be justified where the company hopes to gain an edge over their competition, similar to corporations that seek competitive advantage through continual innovation or quality improvements.

You will also need to place some boundaries around your analysis, both in terms of the geographical scope and time frame for the contingent costs to be considered. For example, some externalities (see inset) may sometimes be included in the evaluation to assess your firm's exposure to potential changes in regulations (e.g., emission regulations or taxes) or to assess other strategic issues.

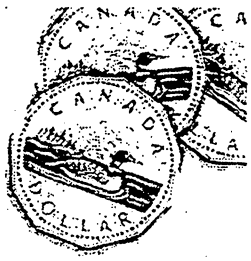
7.3 Characterizing Contingent Costs

After identifying the most relevant contingent costs, you will need to characterize and rank the potential reduction in risks. Specific questions include:

- What is the causal relationship between an uncertain event and the costs that are likely to be incurred as a result of it?

- How likely is the event giving rise to the contingent costs?

- What is the nature and magnitude of the potential consequences?



- How soon might a potential event or cost occur?
- Will the option significantly alter the nature or reduce the likelihood, magnitude or imminence of a particular contingency?

Qualitative Approaches

Where quantification of contingent costs is not possible or the probability and magnitude of risk reduction is highly subjective, qualitative approaches may be preferred over quantitative methods. However, even qualitative descriptions of risk can be expressed with some quantitative anchoring. There are several methods.

Rating Schemes or Risk Reduction Factors

The use of rating schemes or risk factors involves creating scales to characterize risks. For example, a scale can be applied to the likelihood of an event as follows:

Risk Factor	Description
1	Not expected to occur in long term.
2	May occur once over the long term.
3	May occur several times over the long term
4	May occur more than once in a year.

The second step is to construct a scale for the magnitude of consequences. Usually a different scale is developed for each *type* of consequence. For example, the following table shows risk factors for possible public safety consequences:

Risk Factor	Description
1	No injury or health effects are expected.
2	Potentially minor injury/health effects.
3	Potentially moderate injury/health effects.
4	Death or severe illness is likely.

By multiplying the "likelihood" rating with the "magnitude" rating, a total "risk factor" is calculated, both with and without the option. Additional scales can be developed for employee safety consequences, production consequences, mitigation costs, and others. They are commonly added to get a total risk factor. A "risk reduction factor", calculated as the difference between the risk factors of the existing system and the proposed option, and may include the potential benefit of implementing the option.

7

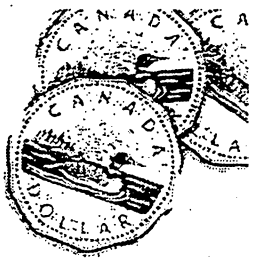
The difficulty with this method is that the selection of the scale (i.e., in this case, 1 to 4) and the range of likelihoods or consequences that fall within each numerical category (i.e., the "description") is entirely up to the judgment of the analyst and dramatically affects the outcome. Further, the practice of adding individual risk factors (for public safety, employee safety, mitigation costs, etc.) assumes that they are equally important - which may be a significant over-simplification. Decision makers, faced with a set of constructed risk factors, don't get an explicit picture of what the contingent costs really are. A more useful method for interpreting the implications of relative risks and contingent costs, is the use of critical value assessment[9].

Critical Value Assessment

Decision making is made simplest when risks are characterized in concise and explicit language. For example, it is more useful for decision makers to know that "without this project, a major spill is highly probable within the next five years, with a likely clean-up cost in excess of $1.0 million", than it is to know that the "risk reduction factor for the project is 1.2". Another explicit and useful way of framing risks is to know "how much would a spill have to cost before this project becomes attractive?"

The "critical value" of a contingent cost is the cost that would make the option financially attractive. It's a useful tool

9 Risk factors and other rating schemes may be useful for some applications in P2 planning and project prioritization, but for the evaluation of individual projects, other methods are preferred.



when you know that a contingent cost exists, but are unable to estimate it.

To calculate the critical value, conduct the financial evaluation for TCA, excluding the contingent cost(s). The difference between the calculated NPV and an acceptable NPV (usually zero) is the critical value (see inset). You can also calculate a critical value using other financial indicators, such as the internal rate of return or payback. Experts and decision makers can then use judgment to assess whether the contingent cost is worth at least this amount.

The critical value will be sensitive to other assumptions in the analysis. So it may also be useful to calculate a range of critical values reflecting the sensitivity to changes in individual assumptions or entire sets of assumptions (scenarios). This is an important component of the decision making stage and is further discussed in Section 9.

An Example of the Use of Critical Value Techniques

Based only on direct and indirect costs and benefits, the NPV of an option turns out to be a loss of $10,000. However, the option is also expected to eliminate potential spills of hazardous waste. A spill would trigger environmental remediation requirements, including excavating and treating surface soils, which is very expensive. The NPV of any future spill must be greater than $10,000 in order for the option to make sense. This is the critical value of this contingent cost.

Only one spill has occurred in the past 5 years, but it cost nearly $50,000 to clean up. Assuming a 15% discount rate, a similar spill any time within the next 5 years would produce an NPV of greater than $25,000. As long as the probability of a similar spill is greater than 40% , the avoided contingent cost is at least $10,000 (0.4 X $25,000) and potentially as high as $20,000 (0.4 X $50,000) if the spill occurs immediately (see Expected Value calculations on page 53).

Benchmarking

Another useful technique for evaluating certain contingent costs or management responses is the use of benchmarks and other comparative studies with other firms. You may be able to compare your environmental risk exposure or certain types of prevention spending with competitors, industry leaders or industry associations. For example, proactive electric utilities have chosen to pursue all no- or low-cost options for reducing their greenhouse gases in an effort to reduce the chance of legal reduction requirements or to reduce their exposure to any future tax on carbon emissions. In some cases, utilities have even set a threshold such that they will approve any option that reduces carbon dioxide emissions for less than $2 per tonne, subject to annual capital constraints.

The Effect of Major Events on Stock Price

An emerging technique for assessing the impact on corporate performance of different risks and options for risk reduction is to study the effect of public events or news on the stock price of a publicly traded company. Stock price reflects the market's assessment of firm value and its expected financial performance. Market theory suggests that all public information about a firm will be assessed, valued and reflected in its stock price. Thus, any sudden change in stock price following a specific event or piece of news can signal the market's valuation of impact on financial performance. Recent event studies have found significant negative returns associated with weak environmental performance as indicated by environmental crises (e.g., Klassen and McLaughlin 1996).

Simplified approaches to characterizing contingent costs are summarized in Figure 7-3. Regardless of the specific approach, the most important goal is to *describe the relevant contingent costs in a simple, explicit and intuitive fashion.* This will go a long way to

helping decision makers with subjective trade-offs and may prove more useful than more advanced, and more complex, risk characterization frameworks.

Figure 7-1 Summary of Simplified Approaches to Characterizing Contingent Costs

Critical Value Analysis	Calculate the value the avoided contingent cost(s) would have to be in order for the option to make financial sense. Decision makers can then decide subjectively whether the contingent cost is at least equal to this value.
Rating Schemes / Risk Factors	Assign numerical risk factors to qualitative descriptions of the likelihood and magnitude of consequences. Add these together for a total risk factor, and count the difference between the risk factors of the base case and proposed option as the risk reduction factor.
Benchmarking	Compare the relevant risk exposures and management systems with other firms (e.g., competitors or industry) to provide a reference point for decision making.

Quantitative Approaches

Ideally, risks should be characterized quantitatively whenever possible. To do this, you will need to:

- assign some probability to the events that may trigger a contingent cost;
- identify and assign a probability to each of the possible consequences of those events;
- attach a cost or range of costs to each potential consequence.

There are a variety of techniques available for assigning probabilities and costs to different consequences (Figure 7-2). Different approaches may be more relevant to different types of contingent costs.

Figure 7-2 Approaches to quantifying Contingent Costs

Professional Judgment	Consult engineers, scientists, lawyers and other experts for their professional opinion regarding the likelihood, timing and/or magnitude of contingent costs.
Engineering Studies & Simulations	Use equipment or process design parameters and simulation models to estimate the likelihood, timing or magnitude of events and associated contingent costs.
Actuarial Methods	Analyze historical data to determine the statistical probability, timing and/or magnitude of events and associated contingent costs.
Case Studies	Use studies of similar situations or events to provide anecdotal estimates of contingent costs. If multiple case studies are available, some average of observed costs may be used. This approach provides a useful reference point for decision making where there is insufficient data to compute statistical estimates (as in the actuarial method) or conduct simulation studies.

The inset on *Demonstrating the Actuarial Method* (page 55) describes the use of the method to estimate a firm's liability of continuing to use PCB-filled transformers.

Quantifying Verbal Expressions of Probability

In the case of professional judgment, some people may use more qualitative expressions of probability. These can be translated into quantitative ranges of probability (Figure 7-3).

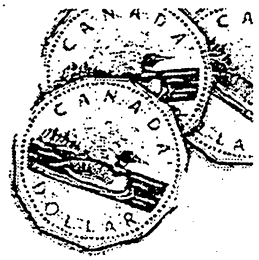


Table 7-3 Rough Correspondence between Verbal Expressions of Probability and Numerical Values (Adapted From Boritz, 1990)

Expression	Average Probability (%)	Range (%)
extremely remote	<1	0 - 5
remote	10	0 - 25
slight	15	0 - 30
unlikely	20	5 - 35
possible	50	25 - 75
probable/likely	65	40 - 80 highly
probable	85	70 - 100

Calculating Expected Value

Once you have estimated the probabilities and costs associated with different events and their consequences, you can compute an *expected value* for the magnitude of each contingent cost. This is simply the product of the probability of an event and its consequences. For example, if the probability of a spill is 40% and the financial consequences are $100,000 in remediation costs and lost production, the expected value of a spill is (0.4 X $100,000) or $40,000. Where there are several possible consequences, you will need to:

- attach probabilities and magnitudes to *each* consequence;
- calculate the cumulative probability of each consequence by multiplying the probability of the trigger event with the probability of each consequence, given the trigger event; and
- compute a weighted average of the expected value of the consequences.

From Figure 7-4, the expected value of a major fire is -

(probability of spill) x (probability that the spill will be major) x (consequences if the spill is major) +

(probability of spill) x (probability that the spill will be minor) x (consequences if the spill is minor)

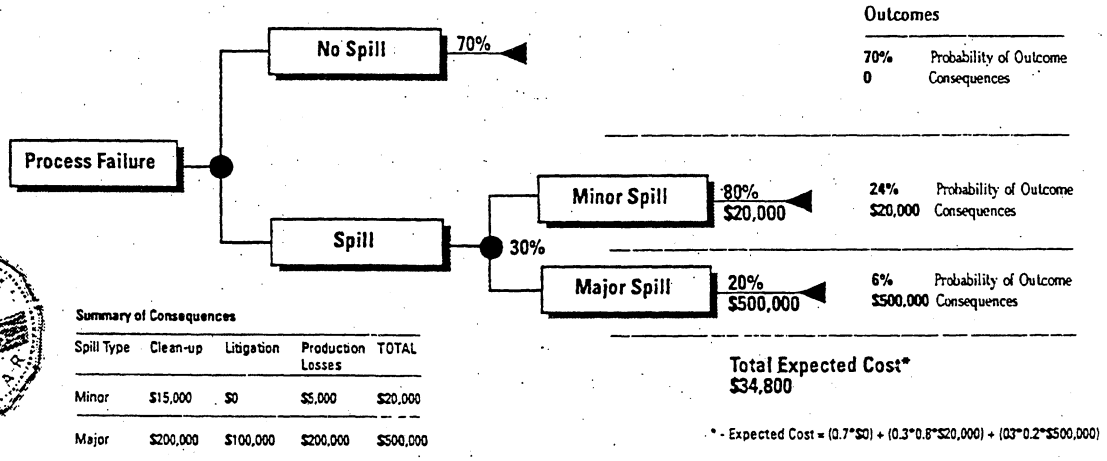
or,

(0.3 x 0.8 x $20,000) + (0.3 x 0.2 x $500,000) = $4,800 + $30,000 = $34,800.

Drawing Event Trees

Event trees are a useful tool for describing and calculating the expected value of multiple outcomes or consequences (Figure 7-4). A separate event tree is required for each unrelated event. For example, a spill and a fire are unrelated since the probability of a fire is not related to the occurance of a spill and vice versa. However, each tree should show all possible consequences resulting from the event[10].

Figure 7-4: An Example of An Event Tree

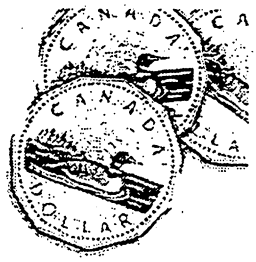


Summary of Consequences

Spill Type	Clean-up	Litigation	Production Losses	TOTAL
Minor	$15,000	$0	$5,000	$20,000
Major	$200,000	$100,000	$200,000	$500,000

10 These conditions are called mutually exclusive and collectively exhaustive respectively.

5-41



Demonstration of Actuarial Method for Assessing Contingent Costs

The Tellus Institute recently used an actuarial approach to evaluate the reduction in liability costs from an accelerated corporate-wide PCB transformer phase-out at a large U.S. manufacturing firm. The project involved replacing all PCB transformers in the company over a 5 year time frame versus an otherwise expected time frame of 30 years. A transformer fire or a transformer spill could give rise to a number of costs including clean-up, litigation, higher insurance, and production shut-downs.

The cost of either event is contingent upon the probability of that event and the probability and magnitude of each of these consequences. The probabilities of a transformer fire and spill were developed from historical databases (an actuarial approach) and were estimated at about 0.000018 and 0.0034 events per transformer-year, respectively. In other words, at a site with 1000 transformers, there will be on average 3.4 spills in any given year. An annual "expected" cost (i.e., $ / transformer / year) was calculated by multiplying the annual probability of each event and the various costs associated with it (see table below). Thus, although the costs of a fire are much higher than a spill, the expected cost of a fire is lower than a spill because of the probability of a fire is much smaller. For example,

Clean-Up Costs = (Probability of Event) x (Cost of Clean-Up)
Clean-up Costs (Fire) = (0.000018) x ($7.8 million) = $140
Clean up Costs (Spill) = (0.0034) x ($100.000) = $339

Litigation costs involve two probabilities, as follows:

Litigation Costs = (Probability of Event) x (Probability of Litigation) x (Amount of Award)

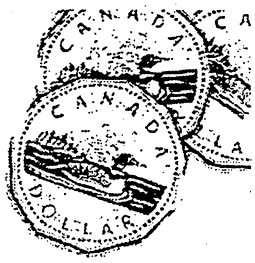
The calculation of shut down costs was more complex since it depends upon the probability of an event, the probable number of days of a shutdown, and the cost per day of lost production. Furthermore, production shutdowns may have

secondary effects at downstream facilities if the output is an intermediate input at other plants. These secondary costs depend upon the number of facilities that are dependent upon the output and the inventory carried by each facility.

	Contingent Cost ($ / Transformer / Year) (Expected Value)		Source(s) of Estimate
	Fire	Spill	
Clean-Up	$ 140	$339	• External & internal databases on PCB-transformer events.
Litigation	$ 68	$ 3,213	• External personal injury database for chemical exposure and industrial suits.
Insurance*	N/A	N/A	
Shutdowns	$10	$1,560	• Professional judgment.
Total	**$218**	**$ 5,112**	

**Because the firm was self-insured, insurance costs were not considered in this analysis.*

Each PCB transformer on site is, therefore, expected to cost the company a total of $5,330 each year. That is, this contingent cost reflects the firm's liability of continuing to use PCB-containing transformer units. The analysis suggests that it is worthwhile for the company to invest up to this amount on a program to accelerate the phase-out of PCB transformers.



Incorporating Contingent Costs into the Cash Flow Analysis

If you quantify your contingent cost as an expected value (or range of expected values), you can incorporate it into your discounted cash flow analysis and ultimately your financial performance indicator. To do so, you will also need to assess its likely timing. For example, you can calculate the contingent cost of site reclamation but the cost won't be incurred until you close the site, which may be five (or twenty) years in the future. The cost should appear in your cash flow analysis in the year in which it is expected to occur. Contingent costs should, like any other cost item, be adjusted to ensure that they reflect after-tax dollars (see Section 8 for details on developing a discounted cash flow analysis).

In some cases, there will be an equal probability of incurring the contingent cost in every year. For example, in the accelerated PCB transformer change-out program described above, the probability of a spill or a fire is characterized as an annual probability per transformer. An annual expected contingent cost is calculated as the probability of the event times all of the relevant costs of that event. This expected cost can be included as a line item under the operating costs in your base (existing) case, and excluded or reduced as appropriate under the operating costs for the alternative option. A new NPV can then be computed for the incremental cash flows associated with the option.

Both the probability and real costs of some events may change over time, reflecting factors such as increasing equipment age or tighter standards. This can be addressed in your analysis either by manually changing the entries in each year of the cash flow analysis (e.g., by adjusting probabilities and consequences as appropriate and re-calculating an expected value for the contingent cost), or applying a reasonable escalation factor to the real (or nominal) values over the evaluation time frame (see Section 8).[11]

---

11 Where there is actually a range of probabilities and costs, Monte Carlo simulation techniques may provide a more accurate estimate of the contingent cost. Users may consult any advanced text on financial evaluation for a detailed description of these techniques.

7.4 Assessing Less-Quantifiable Considerations

There are a variety of costs or benefits which may be more strategic and less-quantifiable in nature. However, these may also be essential to evaluating options. But what are the most relevant strategic or less-quantifiable considerations to include in the evaluation? The following questions provide a useful starting point for identifying relevant strategic values:

- Does your company have guidelines for the preparation of business cases that identify any non-financial or strategic evaluation criteria?
- Does your company have specific policies or guidelines for innovation, quality, environmental performance, community relations, or employee relations that may be used as a basis for measurement?
- Does your company subscribe to any industry standards or product certification protocols (e.g., emerging eco-labeling standards)?
- Does your company have a strategic plan? What are the strategic objectives and targets of your company?
- What are the strategic issues or broad societal trends facing your company or your industry?

Once you have identified a few critical strategic considerations, rank them according to their significance given the specific circumstances of the decision being made.

Many of these strategic considerations may be hard to monetize. However, they may still be characterized in some quantitative fashion.

For example, management had a stated objective to reduce the use and generation of hazardous materials and wastes by 50%. It should be possible to measure the contribution of each option or set of options to this objective, even if the financial impact of the goal cannot be estimated. In some cases, a strategic consideration may be characterized in a simple yes / no answer. For example, "Does the process or product meet standards for certification of the firm or its products under a new labeling system?". Some strategic objectives may reflect specific constraints that management has already determined must be met. Finally, historical comparisons, benchmarks, and case studies may provide useful information for characterizing a strategic consideration.

Again, critical value analysis can provide a useful technique for helping decision makers understand the minimum value they would have to place on the relevant strategic values to make a particular option attractive. As with contingent costs, simple and intuitive characterization of strategic considerations is an essential aid to decision making.

Caution! In all cases, it is essential to screen all of the strategic considerations to ensure there is no "double-counting" with costs and benefits already addressed in earlier analyses. For example, reduced regulatory oversight should not be highlighted as a strategic benefit if the dollar costs of regulation or benefits of regulatory efficiency have already been included in direct or indirect costs and benefits. Similarly, increased market share should not be included here if product prices and sales were already accounted for in determining the expected financial performance of the option.