

**Excellence in Corporate Environmental Leadership**

## *A Sustainability Lens for Capital Decisions*

A Corporate Sustainability Approach to Reduce Business Risk

Prepared by the EXCEL Partnership and  
The Delphi Group

Complexity  
Creativity  
Change

**Delphi**

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# EXCEL

[www.excelpartnership.ca](http://www.excelpartnership.ca)

# Partnership



EXCEL (Excellence in Corporate Environmental Leadership) is a unique learning partnership of major Canadian corporations who are committed to environmental and sustainable development leadership through continuous improvement of environmental performance. Membership is by invitation only. The Partnership was founded in 1995.

A powerful interactive peer group for senior environmental and other corporate executives, members of EXCEL:

- Exchange ideas and experiences to improve the efficiency and effectiveness of corporate environmental and sustainable development activities,
- Interact with high-level federal government officials and ministers to promote public policy in recognition of corporate environmental excellence,
- Assess and share knowledge on innovative practices with leading North American and European corporate sustainability practitioners,
- Engage with and influence capital-market leaders to promote the concept of share value that rewards environmental performance,
- Develop the business case on how sustainable-development leadership delivers tangible results for shareholders, and
- Benchmark performance against a peer group of companies to maintain competitiveness.

The EXCEL Partnership operates under the aegis of the GLOBE Foundation and is managed by The Delphi Group. EXCEL has a formal affiliation with the World Business Council for Sustainable Development (WBCSD).

EXCEL Secretariat

The Delphi Group  
[www.delphi.ca](http://www.delphi.ca)

An Initiative of the GLOBE Foundation of Canada  
[www.globe.ca](http://www.globe.ca)



## P r e f a c e

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November 1, 2005

The world is fraught with risks. Corporations must manage in a climate of increasing globalization, security concerns and climatic change and a range of other mega trends, as they seek to provide value to shareholders. In managing risks, especially risks related to the deployment and performance of capital, can sustainability approaches help companies? The conclusion of the EXCEL Partnership is an unequivocal yes.

The EXCEL Partnership has existed for nine years under the aegis of The GLOBE Foundation of Canada. As a “learning partnership”, EXCEL consists of leading Canadian corporations that operate globally and which have made a commitment to integrating sustainability in their business strategy and operations.

Member companies of the EXCEL Partnership concluded that sustainability tools and approaches related to capital decision making have yet to be fully developed and introduced in companies around the world. For this reason, the Partnership commissioned this study which examines how a “Sustainability Lens” for capital decision making might be devised.

The EXCEL Partnership believes that such an approach to business decision making and capital deployment is important for a number of reasons. Firstly, a “Sustainability Lens” for capital decision making can identify environment and social risks more effectively and assess their relative impact on the performance of capital over an operating lifespan. Secondly, a “Sustainability Lens” on capital decision making has the potential to point to more effective capital placement alternatives which may involve new technologies, or alternative production processes. Thirdly, by integrating sustainability into capital deployment, more effective management systems can be devised. Finally, and perhaps most importantly: how a company deploys and manages capital can have a major effect on global sustainability.

While this piece emphasises the risk side of business decisions, there is an equally important issue in terms of examining the opportunity side from using a sustainability lens. A sustainability approach to business development and growth, as it relates to capital can help to assess the opportunities properly, looking at partnerships, technology choices, and valuing options differently. If sustainability can help assess intangibles on risk, it can also do the same for opportunities. This is another area that would benefit from further research by the sustainability-oriented business community.

The EXCEL Partnership would like to acknowledge the on-going leadership of The GLOBE Foundation of Canada. As the leading ‘business and the environment’ organization in Canada, and host of the globally-recognized GLOBE Series of Conferences and Exhibitions, The GLOBE Foundation plays critical role in fostering corporate sustainability leadership.

The EXCEL Partnership would also like to acknowledge and thank The Delphi Group as Secretariat of the Partnership for producing this study. In particular, the partnership would like acknowledge the efforts of Lead Author, Ted Ferguson, and Co-Author Christopher Henderson, for their ideas and insight which have produced *A Sustainability Lens for Capital Decisions: A Corporate Sustainability Approach to Reduce Business Risks*.

The EXCEL Partnership views *A Sustainability Lens for Capital Decisions: A Corporate Sustainability Approach to Reduce Business Risks* as a contribution to the on-going global effort for corporate sustainability leadership. The EXCEL Partnership and The Delphi Group welcome comment on this report. It is an evolving effort that will be updated for the purposes and benefit of EXCEL members, and beyond to WBCSD companies.

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### Executive Summary

In 2004, the World Business Council on Sustainable Development (WBCSD) released their report entitled *Running the Risk*. In it, the business council explored the notion that business risk is getting more complex. WBCSD's work prompted the EXCEL Partnership to consider how sustainability, risk and capital decisions interact. This work hopes to build on WBCSD's efforts by focussing on risk, through a targeted consideration of a key corporate process that has significant long term implications for society. More specifically, the report investigates the rationale for using a sustainability lens, or point of view for judging and improving corporate capital decisions.

#### Why focus on Capital Decisions?

Capital placement is key to determining the sustainability of human societies over the long term. Companies make billions of dollars worth of decisions every day around the world regarding where to place investment dollars. Many of these decisions will be with us for decades to come. It is imperative from an economic, environmental, and social sustainability perspective that these decisions be made with the widest possible range of considerations taken into account.

#### Risks have changed over the past 20 years - How will they change over the next 20?

Historically, there have been costly mistakes made by companies underestimating, or not estimating at all, the risk from sustainability issues. These errors can be difficult to discuss since they shed negative light on corporate performance, however they need to be considered. Poor corporate decisions around the financial impacts from incidents of environmental impacts, such as oil spills, asbestos liabilities, chemical releases into communities and regulatory changes have negative impacts on investors and the planet. Companies, having to absorb costs from non – financial, yet material factors demonstrates the need for a wider consideration of capital investment risk.

Past mistakes around judging sustainability risks, combined with a rapidly changing world suggests that an improved approach should be developed for decision making on capital investments. These factors motivated the EXCEL Partnership to draft this report - a perspective on the role a sustainability lens can play in improving risk management and due diligence for capital investments in an era of increased risk and heightened expectations around corporate governance, transparency and due diligence.

Two major forces, above many other reasons, are pointing to the need for a more targeted and operational application of sustainability in business decisions, particularly around long term capital placement. These are:

1. **Materiality of Non-Financial Risks:** Significant increases in due diligence and disclosure requirements regarding non-financial risks (e.g. environmental or social issues) which could become material to a company's revenue expectations.

2. **Emergence of Mega Risks:** Significant increases in risks with much greater magnitudes than experienced previously in the world, which have very real impacts on capital investments and their ability to provide a healthy rate of return.

**Defining mega risk:** The term ‘mega-risk’ is taken directly from the WBCSD report and references issues that are far larger in scope, complexity and impact than typically experienced.

### **Risk Management and Value Generation: Two sides of the Same Coin**

Risks are changing for companies. Whether it be environmental or social, the causes and effects of various ‘non-core to business’ issues are real and interrelated. Businesses are not immune to these changes, as such their investments need to be protected against them as best as possible.

Risk management for non-financial, sustainability mega risks is the new challenge. Thus, good risk management requires the application of a sustainability lens. This review considers how risks should be treated under a sustainability lens, what it means for due diligence, and how business opportunity can also be unearthed by taking this approach.

Value generation, however difficult to define, is a constant focus for companies. It has been said the 85% of a company’s value, the difference between its market capitalization and its *real value* ... is intangible value. Coincidentally, sustainability is about intangible value. Thus, a company’s value can be said to be largely a reflection of its sustainability-related efforts. This report recognizes this linkage, and focuses not just on reducing risk but also increasing value through a sustainability lens.

### **Report Approach**

The Report considers the following logic to highlight the value of a Sustainability lens to capital decisions, risk areas, and decision making changes:

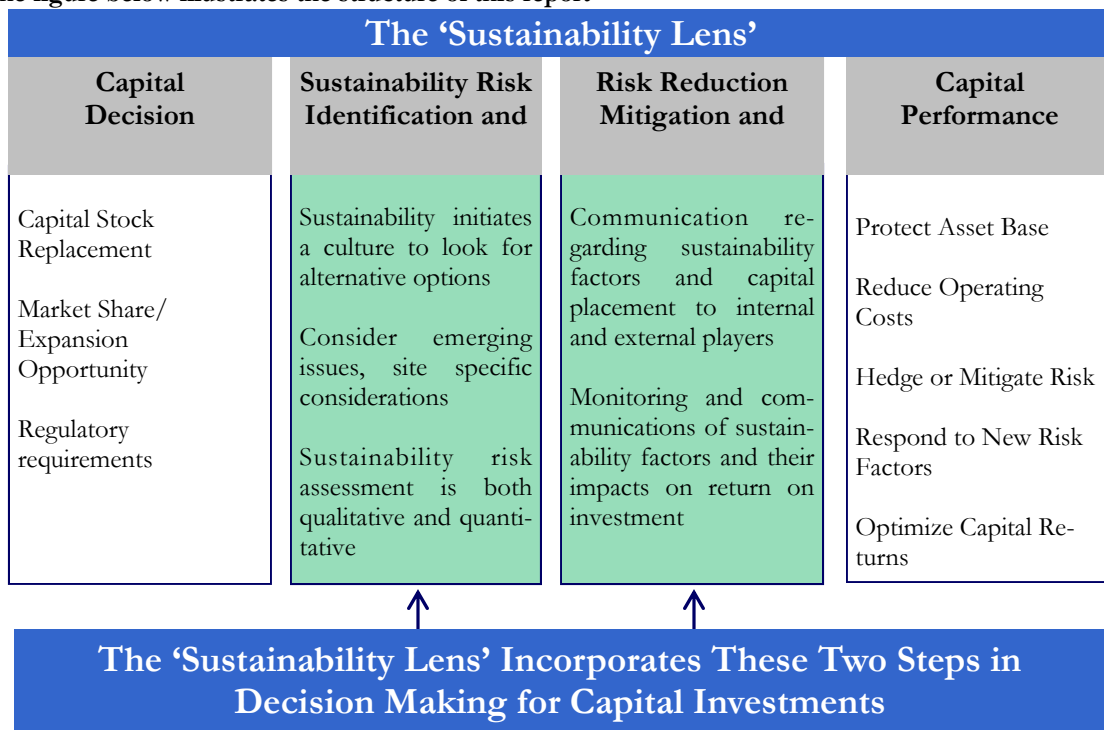
1. **A Consideration of Risks:** Are they increasing, and if so how?
2. **A Consideration of Changes in Corporate Decision Making:** Disclosure expectations are changing, with the impacts of intangibles expected to be reported.
3. **Financial Decisions and Risk:** How have they been conducted in the past, and what are the limitations from this approach.
4. **Mega Risks: Environmental Examples** Where are mega risks forming and what is their specific relevance to business decision making?: Risk areas covered are: biodiversity, climate change, water, and health and the environment. They have been chosen due to their scale, scope, magnitude and characteristics. All transcend multiple risk areas, yet could be ignored in business decisions because they can be categorized as environment issues.
5. **Issue Specific—Sector Specific Lines of Inquiry:** Examples of risk mitigation lines of enquiry for the four issues areas are introduced, as they pertain to four business sectors: manufacturing, energy, consumer products and transportation. These sectors were chosen since they are universally represented across the globe, generic and are multifaceted.

**6. Management System and Decision Making Changes**

Decision making: The process of making capital allocation decisions, and how it needs to change in light of the relevance of non-financial risks to long term investments. Governance issues, trigger points, and more systematic sustainability criteria need to be considered, and then new approaches need to be applied to investment decisions.

**7. Corporate Functions:** how do corporate functions need to change within a company in order to incorporate a wider view of risk? Enhanced consideration of sustainability issues changes the role corporate sustainability, or Environment, Health and Safety groups, along with other functional groups such as finance, should play within their respective companies.

The figure below illustrates the structure of this report



**Next Steps in Understanding the Value of Sustainability to Risk Management**

This report purposefully avoids in-depth management system and metrics approaches. Rather, it focuses more on the process of business decisions, judgment and *wisdom*. However, a possible next step for this body of work would be to consider specific sustainability metrics for incorporation into capital investment decisions. As companies consider new capital investment decisions, mega risk issues such a climate change, water, biodiversity and health and the environment need to be better understood and anticipated in order to prepare long-term capital investments for a changing world. Intangible value generation also needs to be considered in concert with risks. If these new risks present an image of what the world we will be facing over the next half century or longer, the question of how a company continues to grow and earn a profit in such an environment should be asked. Business opportunity needs to be wrung out of these issues as society changes and modulates to manage their inherent dangers and to ensure positive outcomes.

### 1. Introduction

In 2004, the World Business Council on Sustainable Development (WBCSD) released their report entitled *Running the Risk*. In it, the business council explored the notion that business risk is getting more complex. It argued that today's issues can no longer be narrowly defined in environmental, economic or social terms. This review builds on WBCSD's work, focusing on issues around risk to long-term capital investments, and ways in which a sustainability approach can improve due diligence for these investments.

Companies have come a long way in managing environmental concerns, and now more frequently social issues. Management of these risks has gone from 'end of pipe'/compliance approaches to greater degrees of proactivity under the banner of sustainability – what's good for the environment and society should be good for the bottom line. Whereas in the past, environment or social issues were considered to be the government's domain, now companies have corporate sustainability departments integrating these issues into every day business. Despite this progress, mistakes continue to be made by ignoring sustainability related risks that do not fall into the traditional categories of material and/or financial risk to capital investments.

This report therefore contends that; (1) with companies taking 'center stage' more often in society; (2) higher expectations around due diligence; and (3) non-financial but still material risks increasing; approaches to risk management for long term capital investments need to change.

From a purely business or financial perspective, if a broader view of risk is not taken into account for long term investments, poorer investment performance, stranded capital, or significant brand erosion may result. Even without this evolution in due diligence and transparency expectations, or the emergence of sustainability mega-risks, the costs absorbed by companies ignoring sustainability risks would be cause for a change in approach. However, when combined a compelling case emerges for incorporating a sustainability lens in risk management to improve capital investment performance.

Accurately predicting where societal expectations, environmental issues, and economic trends will be in 20 years is a tall task. However, businesses need to consider these issues in order to provide new investments with the greatest likelihood of earning a healthy return over the life of the asset, and to demonstrate that adequate due diligence was undertaken. If risks are changing and becoming more complex, while expectations around due diligence and transparency in business decisions become more stringent, business are being challenged more often to prove they are making good decisions on long term investments and doing the proper risk assessments. After all, these decisions need to incorporate adequate and defensible governance considerations for capital allocation to assets which are meant to produce a rate of return over 15-25 years in many cases. The discussion to follow will seek to illustrate qualitatively the business case for using a sustainability lens in long term risk analysis for an improved return on investment.

This Report has Three Overarching Objectives:

**1. Improve Risk Assessment for Investing Capital in Long Term Projects**

Improved corporate decision making, investment return, and governance.

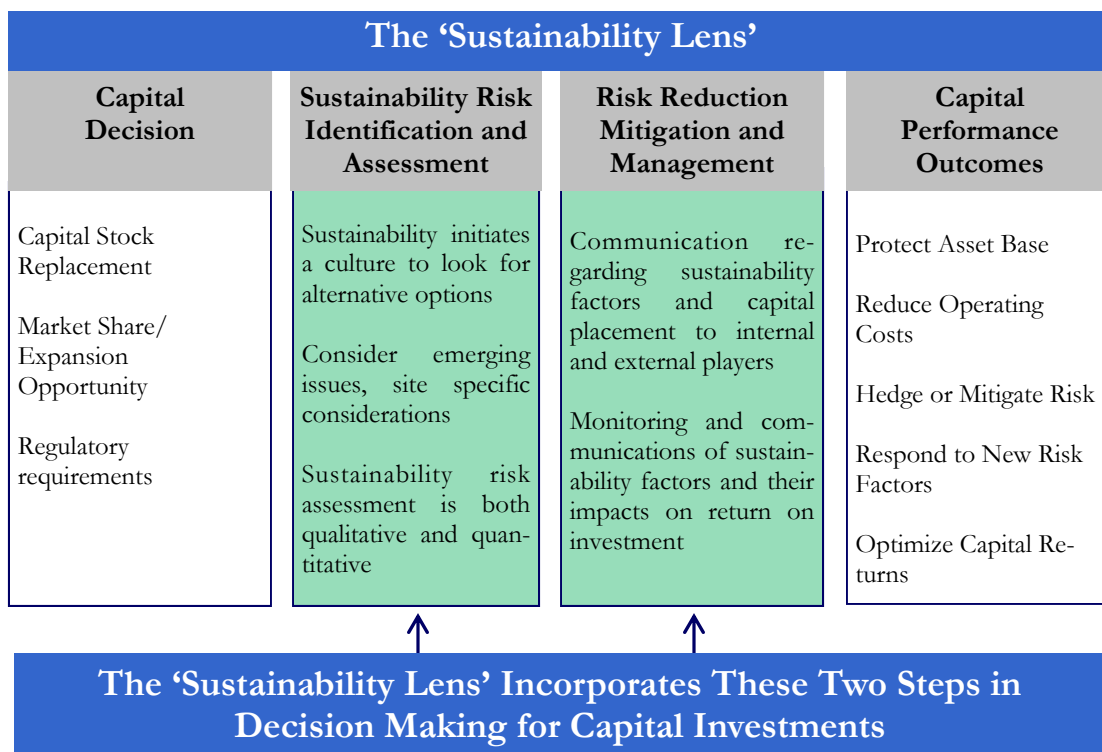
**2. Improve Due Diligence Around Non-Financial Business Drivers**

Increasingly, business are required to report on their due diligence procedures for considering non-financial factors which could become material to a company.

**3. Advance Sustainability**

Better long term global sustainability by improving long-lived capital allocation decisions today.

Figure 1 below illustrates the structure of this report.



*Increasing Project Value with Risk Management:  
It may be time to stop thinking of risk assessment as the killjoy exercise which drains the enthusiasm from your project and to start thinking of it as a tool for enhancing your project's value.*

**ITX Corp.**

Figure 1

## 2. Risks have changed over the past 20 years - How will they change in the next 20

Companies are being confronted with an ever increasing variety of risks, and in particular ‘mega risks’. Business threats appear to be multiplying in number and intensity. Throughout the past decade businesses have been hit directly or indirectly by major public health issues (e.g. SARS, bird-flu), climate and weather calamities (ice storms), water scarcities and the collapse of ‘biodiversity services’ such as fish stocks. These events have put policy makers, business and the public on alert in a reactionary way. However, for companies responsible for long term returns from a capital investment, being aware is not the same thing as being equipped to proactively anticipate and mitigate the effects of mega risks on long term capital allocation decisions.

The following graph (Figure 2) is an example that demonstrates the statistical reality behind the assumption that costs from major risks are increasing in significance and economic impact.

**Figure 2: This chart presents the economic losses and insured losses – adjusted to present values reported by the European insurance firm, Munich Re. The trend curves verify the increase in catastrophic losses from mega-risk type incidents since 1950**

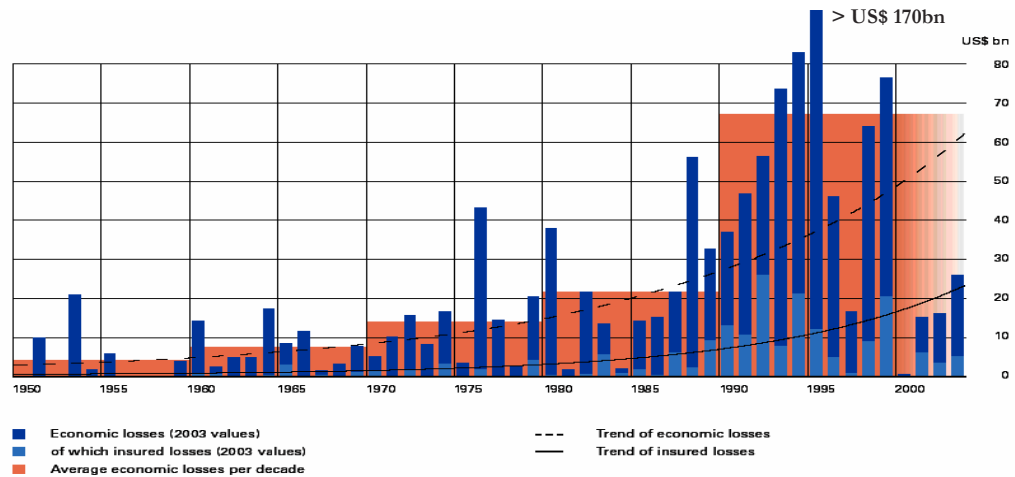


Figure 2  
Source: TOPICS geo  
2003 Munich Re

Another example of costs to the economy from a mega risk is the SARS public health crisis that hit Canada particularly hard in 2003. The Conference Board of Canada estimates that:

- The outbreak of SARS in Canada is forecast to lower real GDP by approximately \$1.5 billion, or 0.15 per cent, in 2003.
- By far, the largest impact of SARS is felt in the travel and tourism industry, which nationally is expected to lose about \$1.1 billion in real economic activity in 2003.

*Unsustainable development increasingly needs to be understood as having the potential to substantially change the risk landscape.*

Swiss Re Sustainability Report 2004

### Systematic vs. Unsystematic Risk

These terms are typically used in financial risk analysis considerations. *Systematic* refers to forces that can affect a whole portfolio equally, whereas *unsystematic* refers to those risks that will affect a particular sector more than others. The mega risks we speak of in this report fall into both categories. Guidance is given at the macro level for improving corporate decisions for systematic risk, i.e. situations of integrating sustainability considerations regardless of the sector. The report also focuses on the possible risk and mitigating behaviours specific to particular sectors, or unsystematic risk.

In this context, what is key for businesses to consider is that these new ‘mega risks’ are more intertwined, with environmental risk leading to economic risk, or social issues more easily affecting the performance of an investment. Because of their magnitude, they can impact cross-sectorally, while hitting one sector harder than others.

#### What’s causing the nature of risks to change, and their occurrence to increase?

**Compounding Scarcity** – global population increases lead to increased demand, and scarcity of necessities like clean water. Examples include the collapse of fisheries stocks worldwide.

**Amplified Impacts** – are more notable, with increased interconnectedness related to growing population densities, greater levels of international trade and significantly improved information sharing across the globe. The finite nature of resources is becoming more evident, with concerns over water and oil supply increasing.

**Globalization of Markets and Issues lead to Increased Complexity** – load/demand on systems is growing more intense as economies grow and natural capital declines. For example, impacts of pollution are occurring long distances from where it is released.

**Security Conscious World** – a perceived reduction in security leads to increases in costs and changing market conditions. Examples include increased shipping costs and delays.

*Storm Costs Could Rise by 66%: The worldwide cost of major storms will rise by two-thirds unless governments start taking immediate action to reduce global warming.*

**Financial Risks of Climate Change, Association of British Insurers, 2005**

### 3. Due Diligence and Decision Making in Business: Rising Expectations

Enron, World Com, Anderson: major business related ethical issues have arisen in the past decade. The fallout has been a sea of change in expectations around transparency, shareholder activism, off balance sheet accounting, and increased scrutiny of non-financial yet material impacts to a company's balance sheet.

The first impacts from the Sarbanes Oxley regulations in the US have been on issues of decision making, accounting practices and governance within a company. Slower to develop has been the resulting increase in expectations for disclosure of non-financial risks to long term returns. While somewhat overshadowed by the more pressing concerns around governance for financial accounting, these issues are now coming to light. The combination of increased expectations around governance with disclosure expectations for non-financial risks is causing a groundswell in changes to corporate reporting and shareholder engagement.

Shareholder resolutions have been increasing dramatically in recent years. Most interestingly, they are often taking issue with environmental risk disclosure, particularly around the climate change issue. US businesses have been the focal point for climate change resolutions from shareholder groups, while companies in other G8 countries are covered by Kyoto regulations. It seems, with or without Kyoto companies are being taken to account on possible greenhouse gas-related risks to their future earnings.

Figure 3: This diagram illustrates two key drivers that lead us to consider in greater detail the application of a sustainability lens for long term capital risk analysis

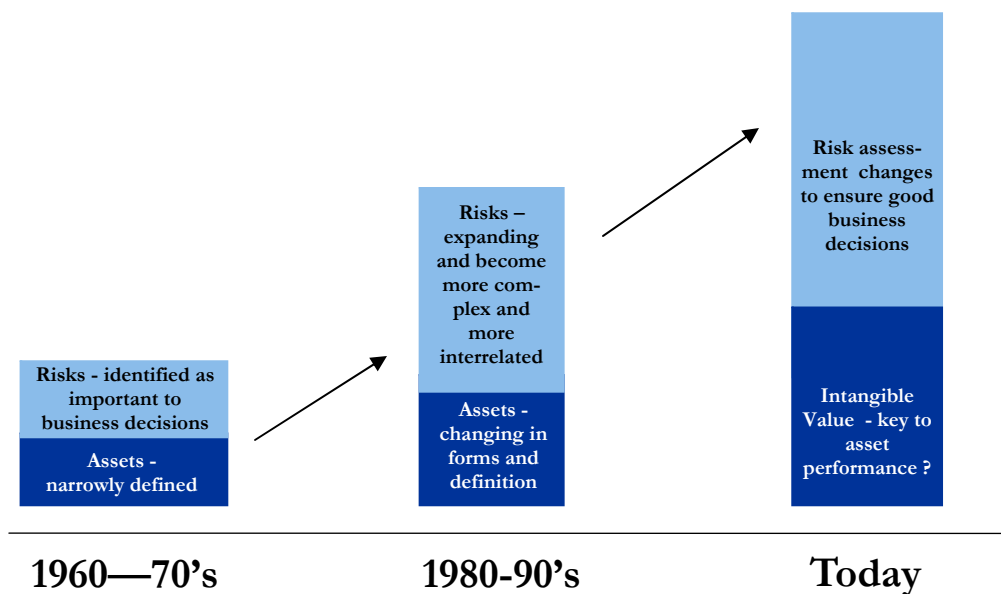


Figure 3

### Due Diligence for Intangible Value Drivers

*As recently as the mid-1980's, financial statements captured at least 75% on average of the true market value of major corporations. In the intervening years, however, that figure has dropped to a paltry 15% on average. That leaves roughly 85% percent of a company's true market value which cannot be explained by traditional financial analysis. The yawning disconnect between companies' book value ("hard" assets) and what they are really worth - their market capitalization - is at an all-time historical high.*

(Baruch Lev, *Intangibles: Management, Measurement and Reporting*; Washington, D.C. Brookings Institution, 2001.)

The changing nature of corporate assets is also a reason for refining risk analysis. In the past a company's key revenue-generating assets were likely to be physical items such as a plant, land or buildings. Increasingly, assets are based on intangibles, such as brand reputation, trust and perceptions of corporate credibility and accountability. This trend is likely to intensify into the future.

What does this tell us? Most importantly, that companies need to employ more sophisticated decision making processes for long term investment decisions involving either internal capital, or capital sourced from the market. Unconventional risks are becoming material and they are demanding a new level of due diligence.

In the face of increased risks, and increased expectations around due diligence and governance, what might be the best tool for better decisions?

This report suggests that a *Sustainability Lens* allows a company to more appropriately assess the risk and materiality of a decision. It is an approach that will shed light on risks previously unmeasured, unknown and unaccounted for. A sustainability perspective that takes a detailed look at qualitative and quantitative social and environmental impacts changes the thinking process for an organization, and most importantly offers the potential to unearth hidden risk and hidden value.

It is critical to note that applying this type of *Sustainability Lens* does not necessarily imply heavier weighting towards social or environmental considerations. Sustainability is about balancing between environmental, economic and social 'bottom lines'. As a result, for companies with an extreme aversion to environmental risk, to the detriment of its investment options, a sustainability approach might actually reduce the emphasis placed on environmental concerns. Regardless of the outcome, a sustainability lens will result in increased attention paid to intangible value drivers for companies.

*Design lifetime has little influence on the timing of capital turnover: Approximately 90 percent of US electric generating capacity built since the 1890's is still in use.*

Pew Center, 2002

### 4. The Nature of the Investment Decision

#### Financial Considerations for Capital Decision Making

For most companies, capital is a scarce and valuable resource. Though the detail and circumstances between companies vary widely, similar procedures are used for allocating capital among various competing needs. (Pew Center, 2003) The goal of these procedures is of course to make the best investment decisions. As such, a raft of tools have been developed to assist the process. Companies and markets use standardized and accepted financial metrics for making investment decisions around the allocation of capital. They consider measurements such as cost of capital, projected revenue from the investment, 'real options', lifetime of the embedded asset, net present value, levelized costs, and a host of other quantifiable financial metrics. They can also include:

- Project cash flows
- Sunk costs
- Opportunity costs
- Depreciation
- Return on Investment
- Internal Rate of Return

These tools help a company decide between options, 'must do' and discretionary business development type investments, and the level of capital that is required and appropriate. They do, however, have important limitations that may insulate a decision maker from considering important non-financial drivers of business success.

The adage 'what gets measured gets managed' is an important consideration in the context of incorporating sustainability into investment decisions. Easily quantifiable, readily accessible inputs to capital investments, such as labour costs, insurance rates, or energy costs will be monitored. Macro issues such as inflation rates, and economy wide growth estimates may also be considered. However, if risks are not easily measured do they deserve to be ignored?

#### The Challenge for Long Term Capital Investment Decisions

Omissions from investment metrics and tools become more acute or glaring the longer the time horizon, and of course large capital often lasts decades. As such, this report asserts that with the onset of an increasing number of complex interrelated issues affecting investment returns, business decisions for these items will need to incorporate improved consideration of sustainability risks, above and beyond traditional financial return analysis. Ultimately, the goal should be to improve returns and increase due diligence.

#### Why are Non-Financial Issues Ignored?

Sustainability issues, be they environmental or social, are often excluded from investment decisions based on their qualitative nature. It is often difficult to estimate in financial terms the impacts of, for example, 'biodiversity risk', or the myriad social issues that arise when implementing a major new investment.

*"We are not social activists, we are independent risk assessors... the information in non-financial reports contributes to building up a company's profile".*

Standard & Poor's  
The Economist

While efforts at quantifying environmental risks, such as greenhouse gas regulations, have significantly improved the ability of companies to include a ‘carbon shadow price’ throughout their operations, many other issues will never be able to be incorporated into a balance sheet in a manner that meets accounting standards. As a result, risk frameworks need to be robust and malleable enough to accept both financial estimates of sustainability risk, while also considering non-financial issues that may impact returns. After all, if 85% of a company’s value is intangible, it is critical that the nature of that value is understood.

Additionally, while financial metrics are intended to provide actual figures and estimates, it is important to consider that these results are built on a set of qualitative assumptions as well, including discount rates, output levels, production efficiency, government policy and market demand amongst many. Subjectivity and normative assumptions about the future are a fundamental aspect of these overtly quantitative investment decision tools, just as they are for sustainability assessments of risk.

Another example of the conundrum facing investment decisions is the difference between fixed and variable costs, and how they get treated in pay-back analysis. Pay-back analysis will often ignore policy-related or non-financial impacts on operating costs. If issues such as higher energy costs due to climate change regulation, or re-engineering costs due to new expanded emissions regulations occur, an investment can easily be affected by unexpected increases in expenditures. The original investment decisions may have been made differently had these costs been anticipated. For example, making energy costs variable in this case, might have exposed them to greater scrutiny, lowering their contribution at the capital decision stage so that the investment would have been better insulated from climate change related regulatory impacts.

### Capital Lasts Decades...So do Issues

Capital investments often last much longer than their nominal lifetimes for a variety of reasons. One of them, most relevant to this discussion, is accounting practices. Amortizing an investment over a set number of years linked with a generally accepted ‘lifetime’ is standard practice. (Pew Centre 2002). Once past this time, investments can be entering a lucrative stage if they are able to continue operating. By this point however, risks have changed dramatically with new issues eroding pay back. These are issues that could be around for many years, lurking below a risk ‘radar’, remaining underground because debate about them occurs within a different community than financial analysts. They are discussed within environmental groups, policy shops, the scientific community, international multilateral organizations, yet often to the exclusion of the financial community. As such, they get ignored in risk analysis.

#### **Variable Costs as a Sustainability Tool**

*An EXCEL company, Teknion, has found great success in treating fixed costs as variable. It enables increased creativity and wider analysis of operating costs, allowing different approaches which reduce or avoid the need for them to remain static or ignored.*

A push to disclose non-financial risks to long term capital investment decisions may come from new sources as mega risks become better understood in the future. For instance, recent attention paid to the risk from climate change costs has been coming from institutional investors rather than environmental groups and is directed at long term revenue implications from environmental risks. Another example is shareholder resolutions on e-waste becoming a concern for technology companies, as has occurred with Apple and Dell corporations. As mega risks are better understood, and transparency or disclosure concerns mature, companies will need to be prepared to answer questions of how they have integrated sustainability risks into their major capital decisions.

If companies are unable to explain their wider view of risk for a particular investment, concern may be spread over the entire management system and decision making process for other company functions, such as regular operations.

### 5. Applying a Sustainability Lens to Capital Decisions

The discussion below explores in greater depth the notional value of applying a sustainability lens for risk identification and delves into the question of how it would help unveil hidden threats to an investment's return while also potentially unearthing hidden value. It will consider conventional and non-conventional decision making as it relates to investment returns and sustainability-related investment opportunities.

To recap the arguments developed in the previous sections: two key drivers are pointing to the need for a more targeted and operational application of sustainability in business decisions, particularly around long term capital investments.

1. **Due Diligence:** Significant increases in due diligence and disclosure requirements regarding non-financial risks which could become material to a company's revenue expectation.
2. **Risk:** Significant increases in 'mega-risks' in the world which have very real impacts on capital investments and their ability to provide a healthy rate of return.

Capital allocation decisions are often as much about business judgement as they are about financial metrics. As per the discussion in section 3.0, risk analysis tools are well established to assist a company in deciding between various investment decisions. However, when these investment decisions are long term, involving capital assets which need to produce a rate of return over 15, 20 or even 25 years, non-financial elements should be incorporated into capital allocation and asset management decisions. Traditional financial assessment tools may not be adequate in the face of increased risks from environmental and social factors, combined with increased scrutiny of due diligence efforts. Even if a company is not planning on keeping the asset in question, it will still want to protect its value for an eventual sale.

Such an approach to business decision making and capital deployment is important for a number of reasons. Firstly, a “Sustainability Lens” for capital decision making can identify environment and social risks more effectively and assess their relative impact on the performance of capital over an operating lifespan. Secondly, a “Sustainability Lens” on capital decision making has the potential to point to more effective capital placement alternatives which may involve new technologies, or alternative production processes. Thirdly, by integrating sustainability into capital deployment, more effective management systems can be devised. Finally, and perhaps most importantly: how a company deploys and manages capital can have a major effect on global sustainability.

By considering a wider view of risk, incorporating sustainability considerations may be key to improved business decision making in this regard, helping to turn liabilities into assets. With these long term concerns in mind, what would be different about a sustainability lens approach?

- In-depth consideration of social issues related to an investment
- Linking environmental and social risks to evaluate for financial impacts
- Consideration of trends and developments occurring beyond a business’ traditional space to evaluate for risk or opportunity
- Application of conventional tools, such as risk-adjusted cash flow projections, or risk-related discount rates to capital investments from sustainability-specific risks.

Figure 6 on page 34 describes where a sustainability lens is specifically applied throughout the conventional capital decision making process in a company.

Whether a company wants to minimize operational risks or maximize sustainable competitive advantage, it is important to recognize that non-financial factors have an important role to play in the quality of an investment opportunity for financial stakeholders. Even for those wedded to a classical economic approach it can be argued that sustainability issues are not ‘externalities’; rather they can be viewed as critical ‘internalities’.

### Exhibit 1: Wider View of Risk

Innovest Strategic Value Advisors argue that the wider view of risk falls into a corporate governance category: “Strategic governance factors fall under a number of headings and include **i)** the broader competency for the board; **ii)** recognition of the value of intangible assets; **iii)** integration of all value drivers into a management framework; **iv)** the ability to create strategic profit opportunities; **v)** a willingness to

monitor, review and communicate performance and finally, **vi)** the power to control non-financial risk”. It is the last three categories listed here by Innovest that have clear parallels to the capital investment decision. The sustainability lens as a governance tool gives company officials and directors a tool to say that at the very least they considered non-financial risk and opportunity issues.

*Globalization and technological progress are leading to ever more complex systems. Technological, social, economic and ecological developments interact in new ways, creating equally complex new risk. Early risk identification becomes increasingly important in this altered business context.*

Swiss Re 2004

**Figure 4:** This illustrates the conventional issues typically considered as core to investment decisions contrasted with those types of issues that are not conventional, are closely related to sustainability, and have risk and due diligence considerations.

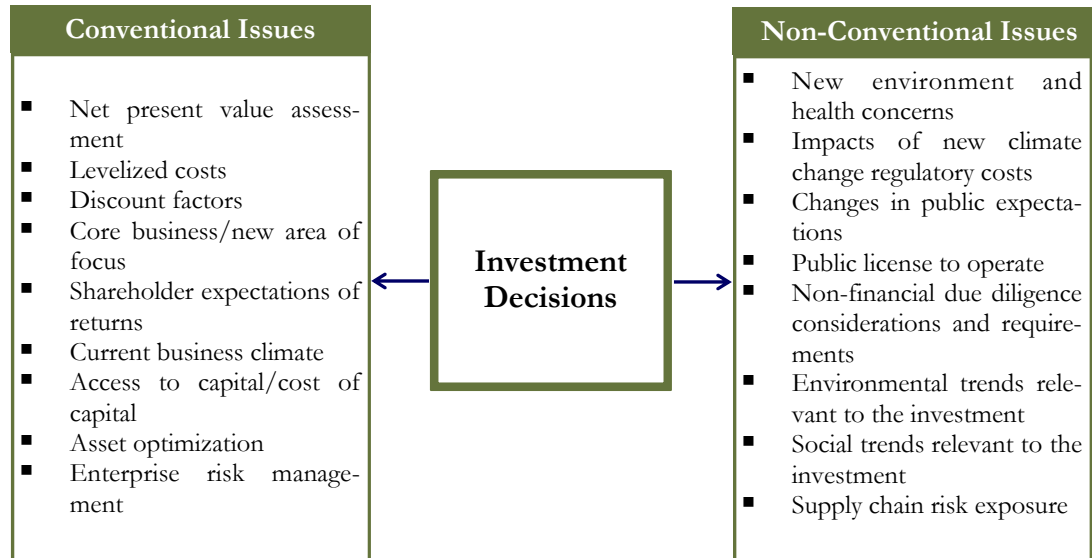


Figure 4

### Investment Opportunity Derived from a Sustainability Lens

From risk reduction to opportunity optimization - applying a sustainability lens could also uncover investment opportunity. Investments that incorporate a ‘wider view’ are often more resilient to change since they either use fewer inputs, have reduced regulatory risk, or clearly create social and environmental value above and beyond their commercial drivers. The idea here is that using a sustainability lens may help to uncover hidden value.

### Examples of Sustainability-Related Commercial Opportunities

- Renewable energy growth rates
- Forestry Certification Schemes
- Reduced material input ‘eco-efficiency’
- Sustainable Transport trends
- Aboriginal employment
- Green building standards
- Clean Coal
- Organic and natural products and food

The aboriginal employment example is an important sustainability-related commercial opportunity to consider. In Canada’s far north, previously antagonistic relationships between companies developing resources and local communities are being replaced with more positive, mutually reinforcing relationships. Companies have realized that those communities offer a wealth of local employment in an area where few people reside. Additionally, by involving local communities in the resource development opportunity, less resistance to a company’s efforts come to play. Taking an enlightened, positive stakeholder engagement approach has improved business results for companies investing in remote locations. This example has been born true throughout the developing world as well in the case of mining companies.

*Toyota is a world leader on sustainability risk and opportunity, developing the market for their hybrid vehicles while reducing the environmental liability associated with internal combustion vehicles. This capital investment decision has not only led to niche market share, but it has also attracted buyers at a different end of the market. Ford has purchased licenses for twenty Toyota patents on hybrid systems and control technology for their own hybrid vehicle development program. Toyota has a track record of licensing hybrid technology to other automakers. In 2002, for example, Toyota and Nissan concluded a long-term agreement on hybrid systems.*

motormouth.com.au

### 6. Mega Environmental Risks that a Sustainability Lens Helps Manage

This section considers in greater detail different types of unconventional risks that are relevant to capital investment decisions as they may influence financial returns.

Mega risk, whether traditional or emerging, are large-scale risks or wide scale trends that can impact societies, human health, the environment and the business sector. Solutions are complicated because these issues are so large that no one really ‘owns’ the problem.

There is risk from sustainability issues, and then there is also opportunity from value generation resulting from a different look at capital investment decisions. As discussed in the previous section, a sustainability lens on risk may provide a tool to zero-in on any externalities related to environmental capital or social capital that are contributing to a proposed investment’s ROI. If sustainability can highlight risk and value, where does it emerge in the most tangible ways as relevant to capital investment decisions? The discussion below considers some examples.

#### Risk and Opportunity Issues

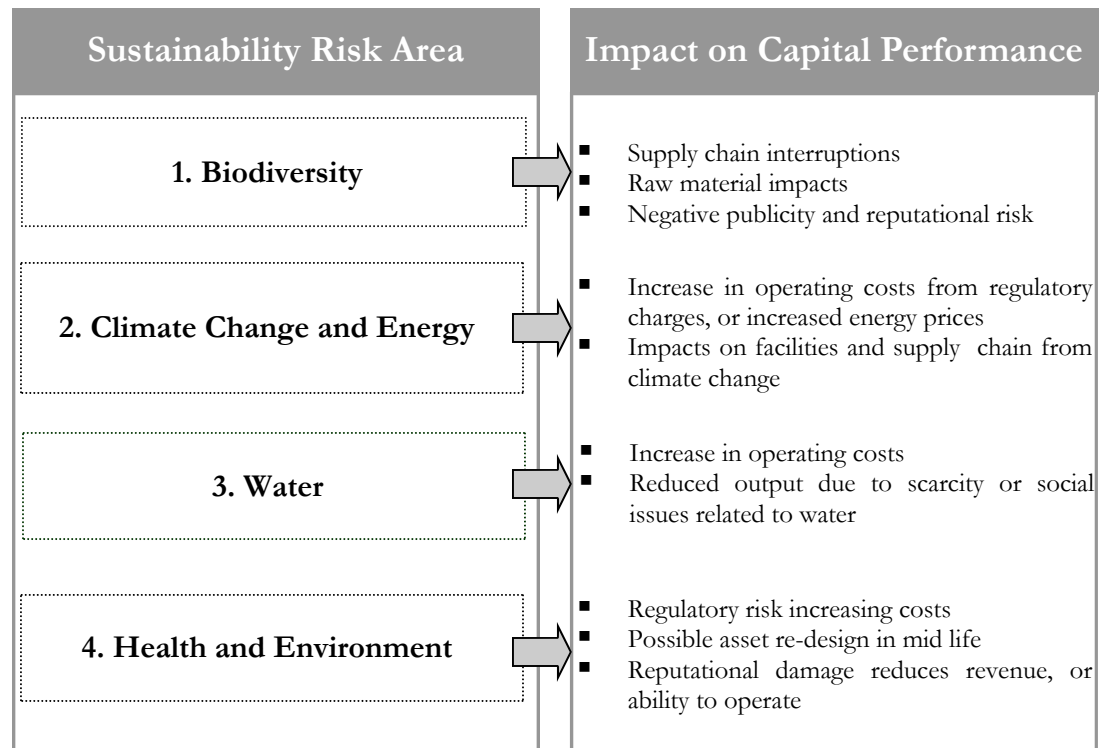
The examples sighted in this section demonstrate how services such as biodiversity, a stable climate, water as a key input, and health-related environment issues could all be key drivers for long term stable economic returns on an investment. Today’s long term issue is tomorrow’s material risk, especially in the case of long-lived capital assets. These issues have been chosen due to their scale, scope, magnitude and characteristics. All transcend multiple risk areas, yet could be ignored in business decisions because they can be categorized as environment issues.

1. **Biodiversity:** What biodiversity ‘services’ does my investment rely upon, and can they be employed to reduce costs?
2. **Climate Change and Energy:** Are there climate change costs from regulation that may reduce IRR in the future, and if capital investment is insulated from these costs will it provide a market advantage?
3. **Water:** How will my capital investment’s balance sheet change if water becomes costly, and is there an option to improve the condition of local water sheds for the benefit of the community.
4. **Health and the Environment:** Does my capital investment incur a risk to human health through pollution or the actual product? Conversely, does it have the opportunity to solve a current health problem?

The following chart provides a summary of issues within the four categories of risk discussed in this report, and ways in which impacts that would not be picked up by traditional risk management could affect the financial performance of a capital investment.

*If species continue to decline in number at the present rate, pharmaceutical companies will find it harder to develop new drugs.*

**Eric Chivian, director for the Center for Health and the Global Environment at Harvard Medical School, United States.**



Considering these issues should be a matter of due diligence. For instance, if one of them negatively impacts a company's IRR, shareholders will want to know that the Board of Directors and management have considered in advance, and what risk management steps were taken. Senior executives may not be up to date on a wide variety of unconventional risks, however they should communicate to management that a diversity of issues needs to be considered as relevant to an investment's performance. Exhibit 2 below provides a good example of where a diversity of sustainability risks can be relevant to an investment's return.

### Exhibit 2: Supply Chain Risk

Another layer of risk complexity is provided by the challenge of managing supply chains. If the capital asset in question relies on a particularly long line of inputs, it is by default more 'at risk' than a stand alone operation. This could be the difference between a power plant and a consumer product. The power plant's mega risks are likely from environmental regulation, or societal issues (public encroachment to the plant/concern regarding emissions). Whereas a capital asset with

multiple inputs needs to concern itself with a larger number of risks, the number of which are likely proportional to the inputs. This is the issue of the supply chain. An investment decision around a capital asset with a long supply chain should look particularly closely at possible impacts from non-traditional mega-risks. A long supply chain carries inherent material risk, especially where a single brand spans upstream and downstream operations.

## 6.1 Biodiversity

The 2004 Earthwatch/ISIS Asset Management study on investment risk and biodiversity identified the following sectors to be high-risk with regards to biodiversity impacts: **construction and building materials, electricity, food and drug retailers, food producers and processors, forestry and paper, leisure and hotels, mining, oil and gas, and utilities.** In another study cited in that report, the economic value of ecosystem services globally has been estimated at US\$33 trillion per year. Undoubtedly, this estimate is difficult to produce and prove. However, it does highlight the notion that traditional financial analysis around capital allocation decisions could easily be overlooking the economic value of ecosystem services to a return on investment.

If this assessment is true, then those companies that consider biodiversity issues in their capital allocation decisions will be better positioned to avoid a deterioration of ROI or even stranded assets. Seven key risk areas were listed in the report, one of which (security of supply) is particularly relevant to capital allocation decisions and is exemplified in Exhibit 3 below.

### Exhibit 3: Fish Supply Risk

Frozen fish represent 2% of Unilever's total sales (~\$100bCDN/yr). Unilever's key capital asset for this business is their 'Bird's Eye' brand of frozen fish. They have invested heavily in this brand over the years.

**Biodiversity risk exposure:**

Consumers have a strong preference for cod fish in this product, and Unilever buys 5% of the world cod supply. Meanwhile, fish stocks are declining around the world, with cod stocks in particular collapsing in many regions. Despite efforts to change fish types in their products, Unilever has not been able to change consumer preferences for cod.

**Financial relevance:** Two drivers are squeezing Unilever – higher input costs from reduced

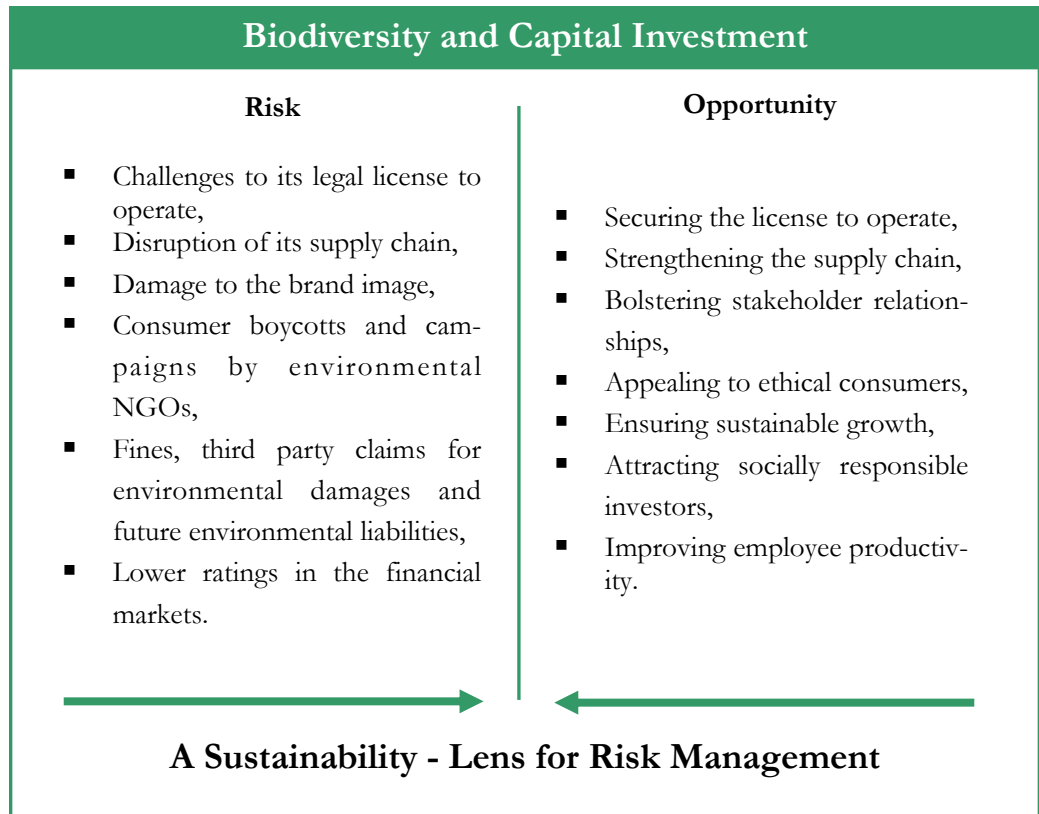
cod stocks (50% increase between 1996-2000) and an unwillingness by consumers (low price elasticity) to pay more for the product. Unilever has had to absorb 30% of the additional costs thus severely reducing its profit margin on this product.

**Analysis:** If the decisions to invest in the cod brand of frozen fish (advertising, processing facilities, distribution network) had been contrasted with the biodiversity risk cod stocks were experiencing Unilever may have chosen a different path with their investments. It would be interesting to know if once the 30% reduction in profit is factored in whether the capital investment in this product would have passed the internal hurdle rate used by Unilever for capital allocation decisions.

*"Fifteen years ago, companies were saying that climate change was not relevant to business. You could not measure it, companies had no individual responsibility for it, and there were no global regulations to control it. Many companies argued it was not happening at all. Scientific evidence and government action have fundamentally changed this scenario. I believe that the issue of biodiversity could well take the same path."*

**Tom Massey,  
Environmental Regulation Manager, RWE Power**

The illustration below contrasts the types of biodiversity risks that could negatively impact cash flow for an investment with biodiversity-related business opportunities.



### Ecological Services to Capital Returns: Opportunities

*As scientific understanding of ecological services improves, new financial opportunities emerge. For example, the importance of insect pollination to the quality and quantity of agricultural crops such as coffee, almonds and apples, has only recently become appreciated. Last year, a study in Costa Rica found that on one farm alone the natural pollination of coffee by insects was worth \$60,000. Coffee yields were 20% higher on plots that lay within a kilometer of natural forests.*

(Economist, April 23, 2005.)

As human society consumes greater quantities of natural capital, scarcity and interconnectedness will become increasingly relevant to corporate decision making. Recent analysis suggests that biodiversity issues are already showing themselves to be real threats to capital investment performance. Section 7.1 of this report provides companies with approaches and ideas for integrating the biodiversity issue into their capital decision making process.

### 6.2 Climate Change and Energy

The recent reports from the Carbon Disclosure Project provide an excellent resource for evaluating the risks from both climate change and the regulations put in place to try and respond to it. There can be a multitude of impacts on assets and capital investment regardless of what industrial sector is being looked at. The essence of the issue for business is fairly simple though - climate change is a long term issue, thus long term investments need to take it into account to insulate returns against its threat.

**There are two key elements from climate change that are relevant to risk mitigation:**

- 1. Impacts from actual climate change: i.e. will changes to regular climate patterns negatively impact an investment.**
- 2. Greenhouse Gas regulations: i.e. regulation to reduce emissions that cause climate change may impact an investment, particularly when energy figures prominently as an input or an output.**



Prince Edward Island Confederation Bridge was built by taking into consideration that sea level rise will continue in the future under expected global warming. The early assessments reports recognized that the mean sea level had risen 0.14 m over the 50 years leading up to that time. This decisions will help reduce the risk of unexpected costs creeping up in the future.

#### Exhibit 4: New Energy Risks

Goldman Sachs did a Global Investment Research report in 2004 which looked at an Environment and Social index for new investments in the energy sector. One of its conclusions bolsters the sustainability lens concept: “The Changing World – A More Complicated, Competitive Place – We believe that it is not sufficient for companies to excel in traditional areas such as geological estimate, technical considerations and financial analysis. They must also be able to work with diverse partners, national oil companies, local as well as multinational contractors,

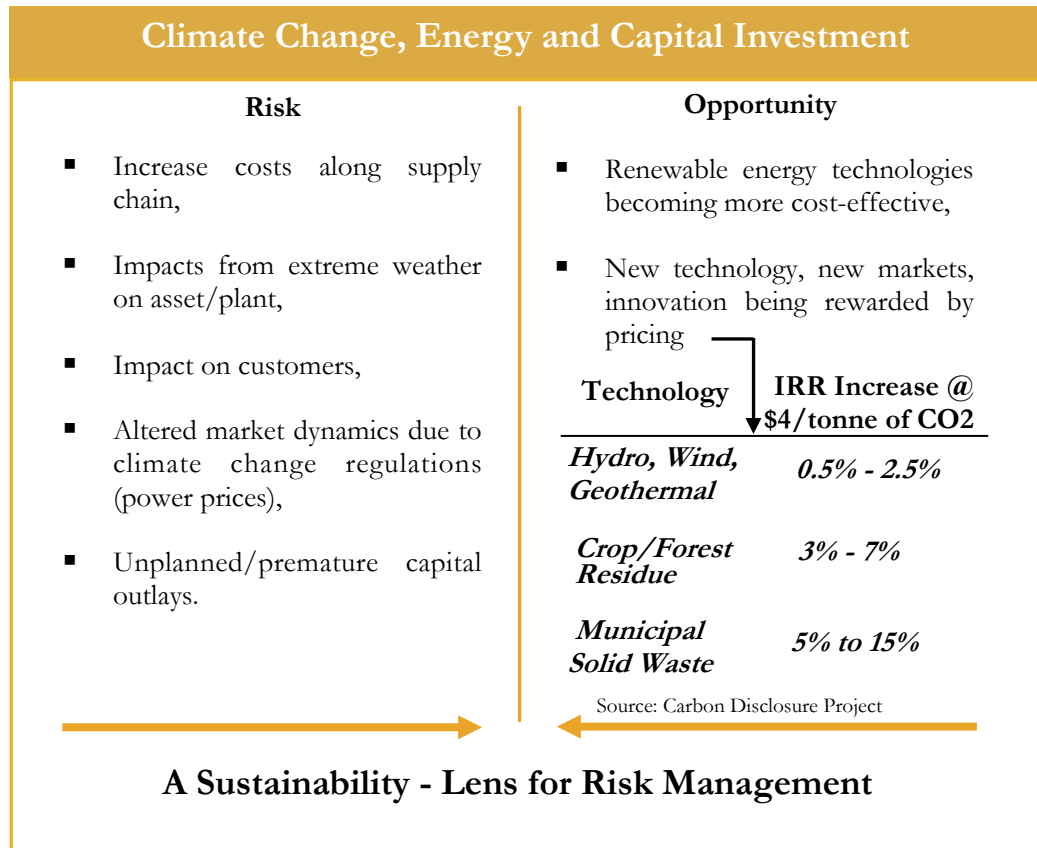
government officials in host government and neighbouring countries, local communities and employees, and NGOs such as environmental and human rights activists. All of the above must be successfully negotiated in the glare of an unforgiving media spotlight, in a world where corporate governance and environmental, safety and ethical issues are high on the public’s agenda.” A key point Goldman Sachs make is that “in an increasingly complex world, social and environmental issues are having an increasing impact on companies’ future project slates.”

Climate change policy risk: *“The uncertainty Cinergy faces in the current regulatory climate has made it difficult to plan the capital expenditures we will need to make to comply with all environmental requirements while continuing to serve our customers’ future energy needs in a reliable manner”*

**Cinergy Corporate Statement.**

## A Sustainability Lens for Capital Decisions

The illustration below contrasts climate change and energy related business-risks with related business opportunities. It includes an assessment from the Carbon Disclosure Project regarding possible internal rate of return increases for GHG-free energy technologies.



Climate change is perhaps one of the better understood mega risks facing companies and their capital investment decisions. It is also one of the easiest to quantify and incorporate into financial balance sheets due to emission trading systems affecting companies. As a result, institutional investors have been out in front of regulation demanding corporate disclosure regarding related risks. Despite the publicity surrounding the issue and its analytical qualities, public policy responses vary widely, and are particularly vulnerable to political whims. As such, companies need to employ sophisticated risk analysis and business judgment to meet growing expectations in the investment community and guard against costly regulations. Examples of techniques are provided in section 7.1 of this report.

## 6.3 Water

For many new investments, water is considered to be a secondary or tertiary issue for risk analysis. Unless the project is a hydro plant, or something where water is considered to be a fuel source, its importance is likely to be overlooked. This approach could be fraught with financial risk. Consider a plant which only uses a small amount of water for production, however this water is essential for its operations. If water scarcity occurs in the area, or if drinking water supplies are harmed, a major reduction in water availability could occur. This would lead to increased costs, or in the extreme temporary operation shut-downs. It is difficult to predict the availability of water resources, however assuming its supply is a 'free good' may be misleading when calculating costs for a new investment. In addition, considering that water is an essential good in municipal settings, and utilities exist to provide this service to the public, it is likely that they would receive priority over an industrial facility's demand for water.

**Two key risks exist which could impact availability of water:**

- 1. Supply: reduced through overuse, waste, population increases, climate change, changes upstream in a watershed.**
- 2. Quality: Pollution from runoff, poor treatment, contamination from unlikely sources, major structural damage to distribution facilities.**

### Exhibit 5: Beer Supply Risk

In 2001, Anheuser-Busch, the world's largest brewer of beer, experienced business impacts from unexpected water shortages affecting its supply chain. A temporary drought in the US Pacific Northwest increased the prices and reduced the availability of key inputs to Anheuser-Busch's brewery operation – barley and aluminium. An unusually dry winter, coupled with a turbulent West Coast electricity market that is highly dependent on water for power generation, created intense short term competition for limited freshwater resources. Reduced allocations of water

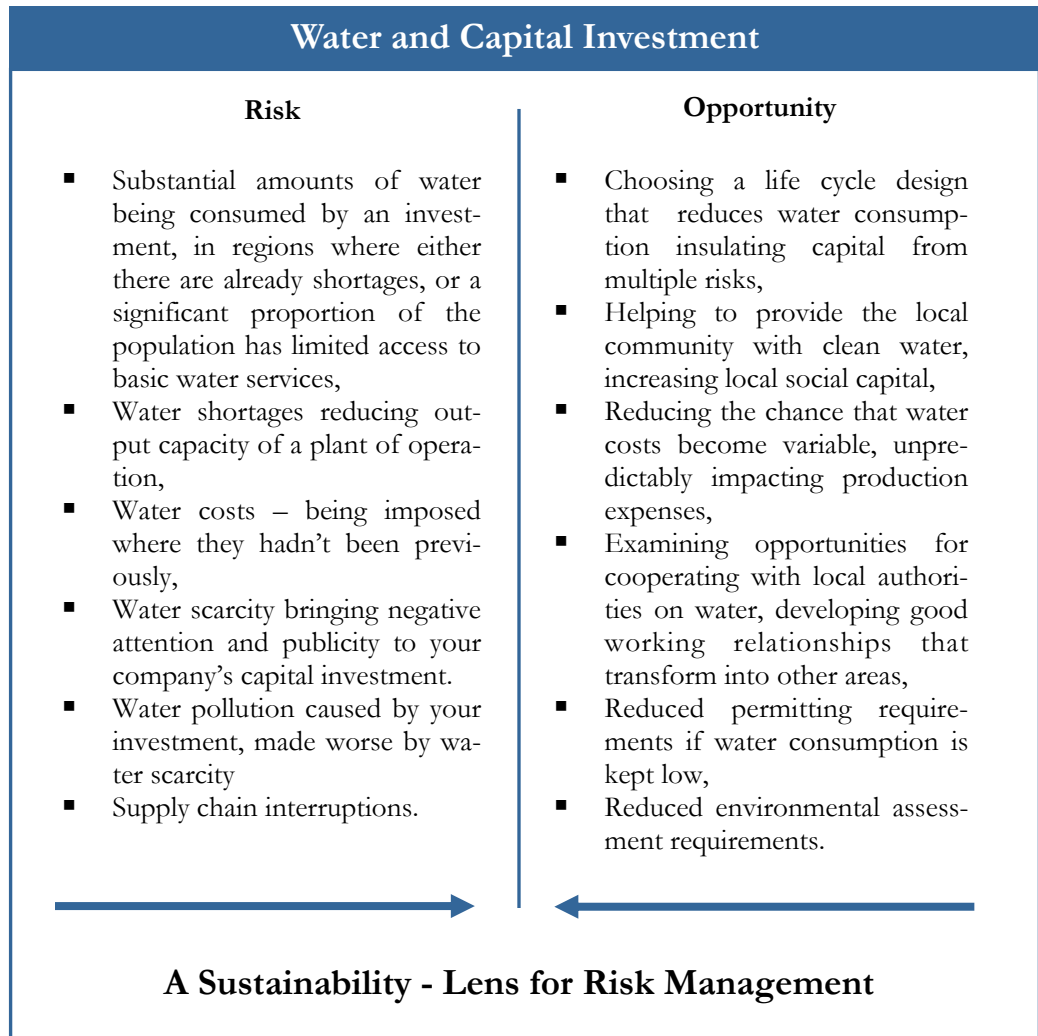
for irrigation in Idaho resulted in reduced acreages of barley, a key brewery ingredient. At the same time, aluminium production, which relies on large amounts of low-priced energy generated from hydroelectric dams in the region, was drastically reduced as electricity prices skyrocketed. This experience in facing water-related challenges along the supply chain has expanded [Anheuser-Busch's] business case for taking a more comprehensive, strategic, and sustainable approach to water issues.

**Pacific Institute: Freshwater Resources (2004)**

*Industrial uses of water average 59% of total consumption for developed countries*

**WBCSD Water Facts and Trends 2005.**

The illustration below contrasts risks from water supply and quality issues to business investments with opportunities for improved business performance through incorporating water-related considerations

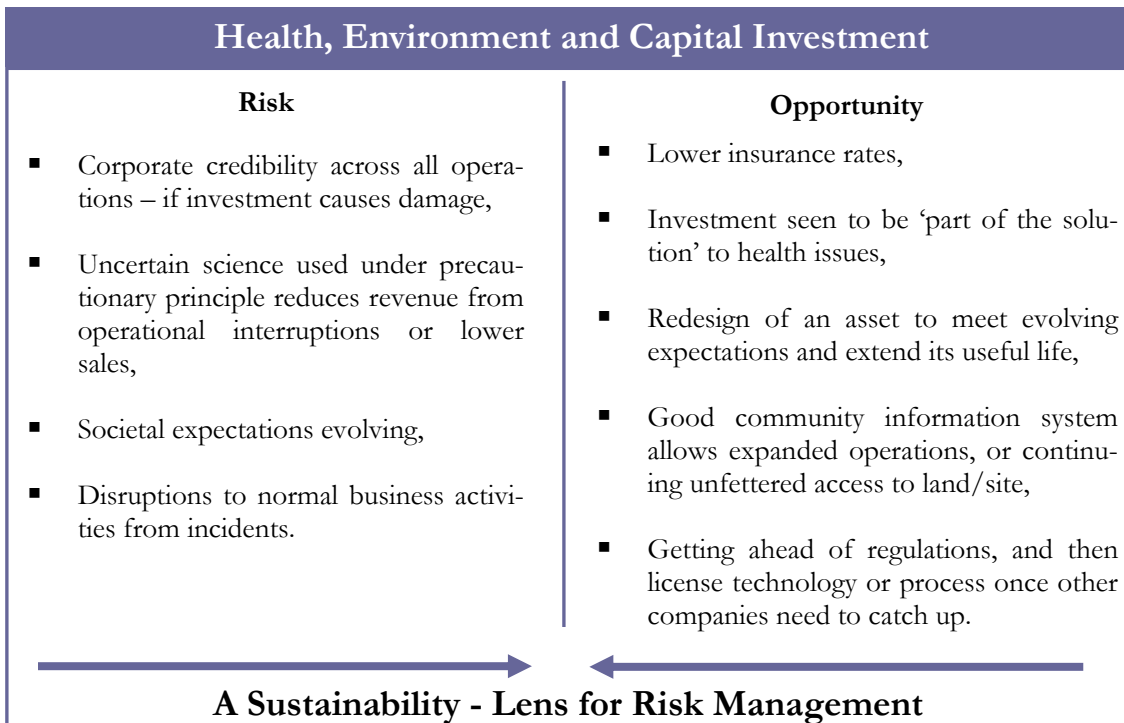


Water, a commodity taken for granted in some parts of the world, while desperately sought after in others. This inequality may take the form of capital investment risk as the future unfolds. Companies need to understand their role in the use of this public good, and ensure that their investments are protected against greater scrutiny of water consumption, and the maltreatment of potable water sources. Section 7.1 of this report provides tools on how companies can better manage their water risks.

## 6.4 Health and the Environment

Increasingly, companies are being held responsible for the environment-related health impacts of their products. Whether it be the result of products and operations negatively impacting people’s health, or people living closer to operations and being better informed of health risks, companies are feeling the financial effects of evolving expectations around health risk. It is also one of the most tangible risk areas listed in this report, with ‘heartstring’ issues arising where people feel very closely connected to impacts through either direct effect or a sense of empathy for others. Compounding this effect is the predominance of several high profile health and the environment incidents during the last several decades related to industrial development (Bhopal, Love Canal, Chernobyl), combined with the impact of increasing access to information by the general public. Today, any company emitting pollutants, toxics or hazardous waste will be listed on some website somewhere on the internet. Companies are also feeling the effects of expanding cities and towns, as people begin to live around plants that were once kilometers from the closest house.

**The illustration below contrasts the types of health and environment risks and opportunities that could impact cash flow from an investment.**



*DuPont formed, in February 2000, an independent panel to guide their actions and help them in considering and addressing important issues in the development, testing and commercialization of new products based on biotechnology. The advisory panel audits the Company’s progress and provides a public report on a regular basis. DuPont has been able to dialogue, raise questions, and voice concerns, and has used the Panel advice in the formative stages of policy and product development.*

Health and the environment is perhaps the most complex of the four issues cited in this report. It encompasses an examination of product liability and life-cycle impacts. These are issue areas where social, environmental and economic issues interact with significant consequences for companies. Intangible drivers of a product or processes’ success need to be well understood in order to insulate a company from health and environmental risks. Section 7.1 of this report will provide some tools in this regard.

## 7. How Should Capital Decisions Change ?

If we accept the proposition that risks are becoming more complex, and due diligence expectations are increasing, what then should the business response be? Furthermore, if a sustainability lens is at least part of the answer to improved risk management, how should it be developed, integrated and applied?

To help answer these questions, a list of subjective, qualitative techniques for using a sustainability lens to improve risk analysis specifically targeted at long term investment decisions will be considered. This discussion is as much about making new capital decisions as it is about managing current assets in an optimal manner.

Returning to the fundamental objective of this review, what do sustainability considerations tell us about risk? First off, for every issue falling under economic, environmental or social categories, there is value in analysing impacts in the other two. Thus a triple bottom line approach will increase the number of parameters considered under a sustainability-based risk analysis. Taking a sustainability approach also infers a long term look at trends. Therefore, for investment analysis purposes, trends which could possibly affect the rate of return on a particular project, even if they are in their infancy, should be considered.

**Figure 5 below recaps the broad types of changes occurring in the world that will have unexpected impacts on business, and highlights the response companies should consider.**

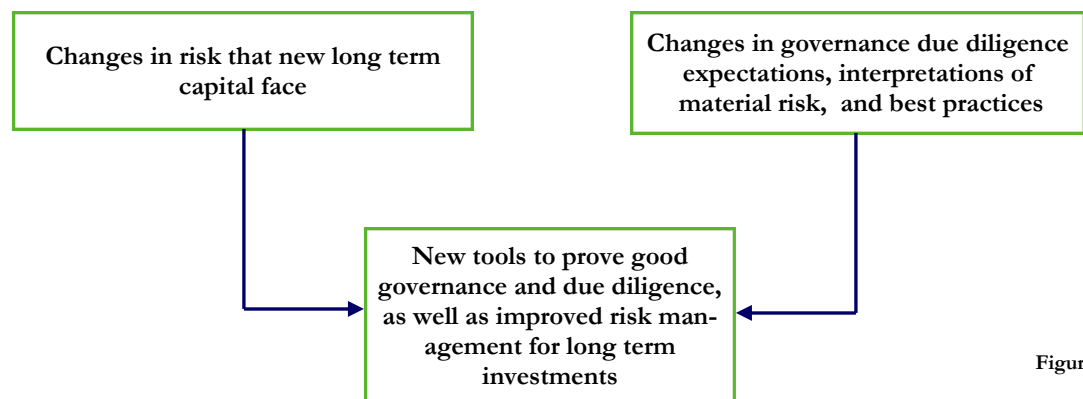


Figure 5

To seemingly state the obvious, the risks we are referring to are excluded from conventional risk analysis because they are unconventional. Therefore, if there is a desire to identify them on the corporate radar screen for new investments people familiar with unconventional, non-financial risks and issues need to be engaged. This role could be handed to external advisory panels (as some companies have done) or a company's sustainability department. The key issue here is, as mentioned in section 2, "what gets measured gets managed", so if sustainability factors begin to get airplay during investment decision making, they will also likely be monitored during the life of the capital asset.

### Incorporating Sustainability into Capital Decision Making Processes

Figure 6 on the next page details the conventional capital decision making process used in corporations. Standard business models typically incorporate a systematic approach to decision making for major capital allocation items, or for asset management. These processes were originally intended to cover due diligence and governance concerns. They are systematic so that they can be used each time major decisions need to be taken, and they will also be auditable.

The process of due diligence and decision making can be accentuated with a sustainability lens, offering an opportunity to:

1. Promote innovation through unconventional approaches to analysis
2. Increase communication between different corporate functions
3. Augment the governance process by investigating more investment risk and value generation opportunities.

Figure 6 illustrates along the *Sustainability Lens* column how an unconventional sustainability consideration could be inserted into the conventional decision making process, which is illustrated in the corresponding box in the column to the left. The process of decision making is sequential, and the illustration generally follows step-wise the decision making procedure in a company when considering a major capital investment.

In light of increased complexity around risk, in particular non-material social and environmental issues combined with enhanced disclosure, due diligence and transparency expectations, the substantive aspects of this system should change. That is, the words used in decision making need to change, the people that are consulted within the company need to change, and the attitudes towards non-financial risk drivers need to evolve.

## A Sustainability Lens for Capital Decisions

Figure 6 illustrates how to Integrate Sustainability into the Conventional Capital Decision Process:  
 “The song remains the same, but the words need to change.”

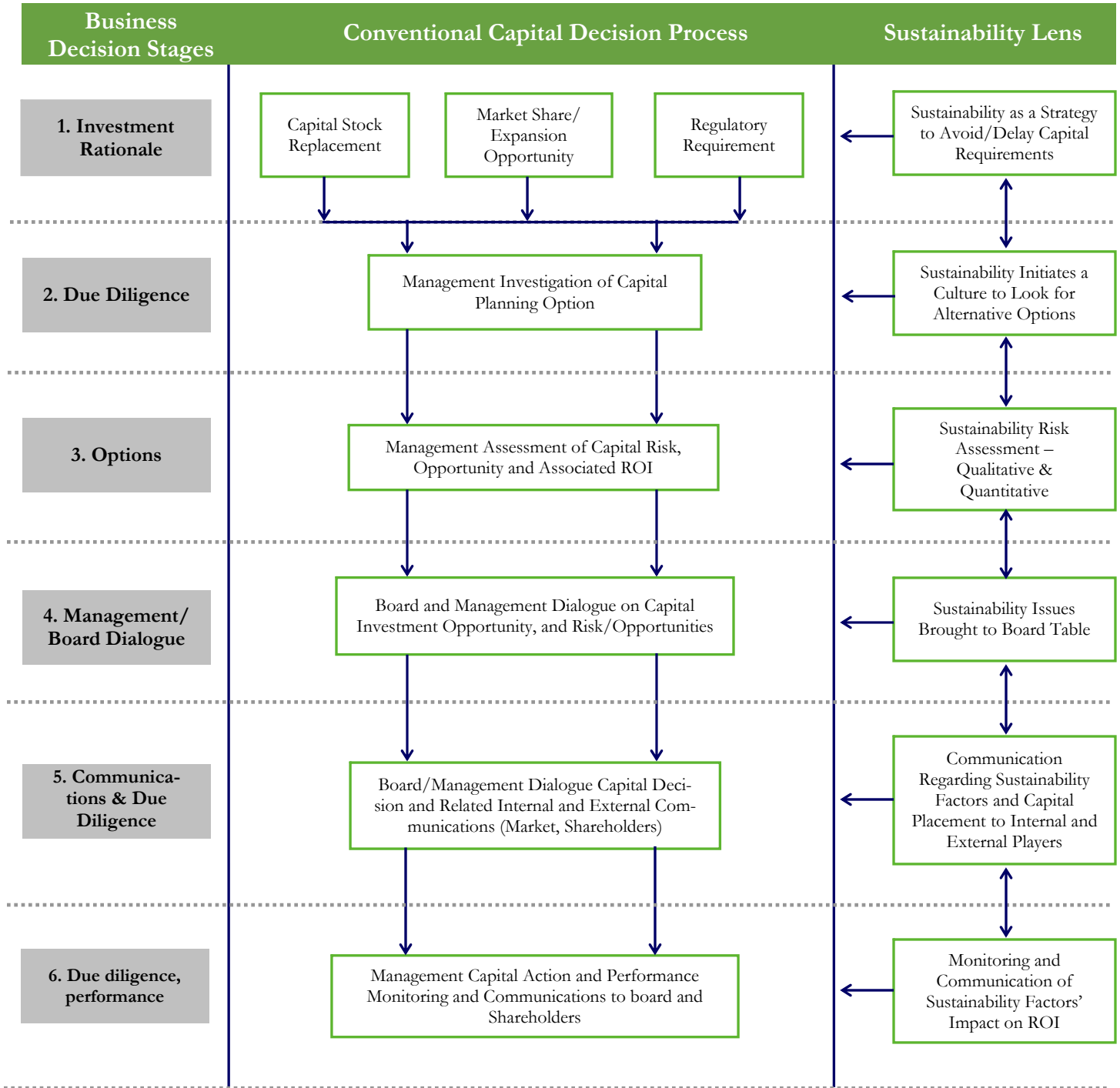
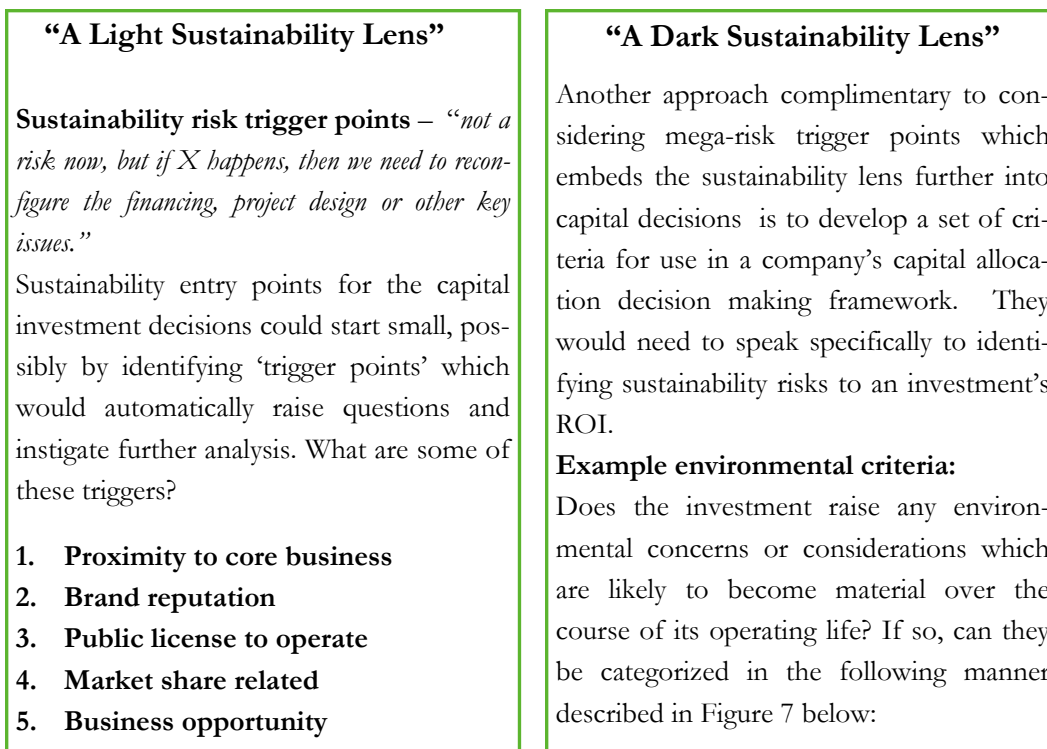


Figure 6

**Sustainability ‘Hedging’**

Companies hedge their conventional future financial risks and liabilities regularly - for instance with energy prices or exchange rates. Considering sustainability risks is a similar process, except that it zeroes in on environmental and social risks that could have a material impact on a capital investment’s financial performance.

**Two approaches to integrating sustainability are described in brief below:** They offer a ‘light’ approach which is less onerous, and a more thorough approach which embeds the concept deeper in decision making for new capital investment, and management options for existing assets.



Risks or Possibilities?  
*Travis Engen, President and CEO of Alcan Inc. refers to “a range of possibilities” rather than risks per se. This approach is much the same as the sustainability lens concept, as it encourages the people in charge of an investment decision to look as wide as possible when conducting due diligence and making their assessments regarding the likely future performance of an investment decision.*

**Figure 7:** This illustrates in two sections the different categories of risk from sustainability concerns, and possible starting points for assessing potential issues. There is of course overlap between these variables, which increases the complexity of managing them.

**Step 1 - What type of environmental risk is it?**



**Step 2 - What is the scope?**



Figure 7

## A Sustainability Lens for Capital Decisions

Once sustainability risks have been identified, a team which includes both financial and environmental/sustainability experts would be required to assess their magnitude, relevance, scope and materiality. This analysis would inform a decision as to whether these risks should be acted upon. If the decision is not to act, the risk assessment should then be documented for auditing

The following chart provides a summary of mitigating actions companies could consider taking to reduce sustainability-related risk from the four categories of issues.

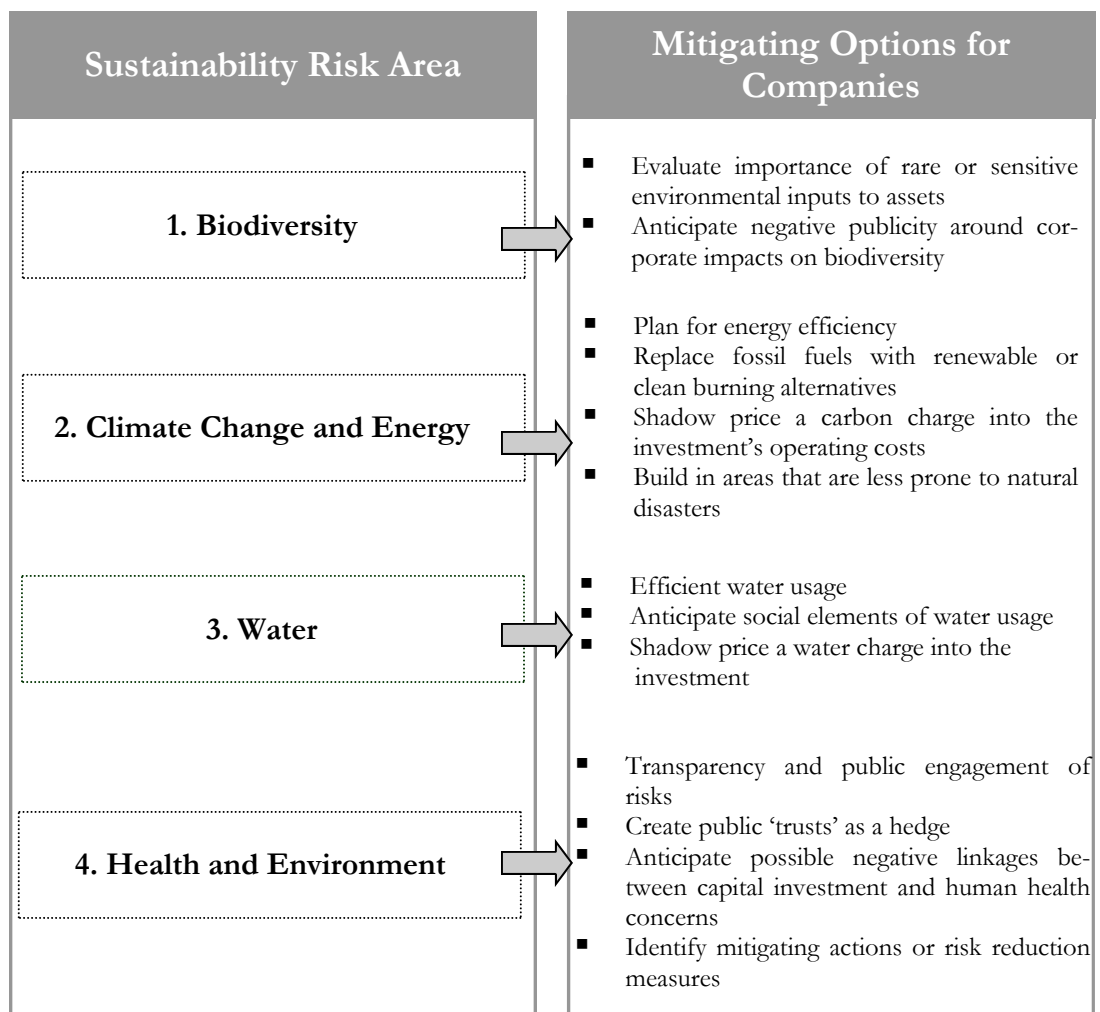


Figure 7

## 7.1 Issue Specific – Industry Specific Tools: Superior Risk Management

Below are examples of risk mitigation lines of enquiry for the four risk areas, as they pertain to four business sectors: manufacturing, energy, consumer products and transportation. These sectors were chosen since they are universally represented across the globe, generic and multifaceted.



### Biodiversity

1. **Manufacturing:** Does the supply chain for the product have any significant reliance on a ‘biodiversity service’? Example: Wood supply from a rare forest or ecosystem.
2. **Energy:** Are there significant existing or emerging biodiversity risks in or around the land base for the new energy project? Example: Oil platform in a rain forest.
3. **Consumer Products:** Do the ingredients of the product rely on a ‘biodiversity service’ for a significant portion of its make-up? Example: Pharmaceuticals which rely on plant and animal diversification.
4. **Transportation:** Do the products that make up a new transportation business activity (items shipped) rely on a ‘biodiversity risk’? Example: Major shipments of frozen fish (requires expensive refrigerated equipment) at risk from a reduction in fish stocks.



### Climate Change & Energy

1. **Manufacturing:** Does the new manufacturing facility require major inputs of fossil-based energy, or does it sit in a vulnerable area (low lying)?
2. **Energy:** At various greenhouse gas emission reduction requirements and costs, does the investment still earn its required ROI ?
3. **Consumer Products:** Does this consumer product perform better on climate change-related variables than its closest competitors in the market?
4. **Transportation:** Will an increase in fuel costs from GHG regulations or efficiency standards significantly erode the ROI for this new investment?

### Water

1. **Manufacturing:** Does the new manufacturing plant have a major requirement for large volumes of water, or is even a small amount of water an essential element to its operations?
2. **Energy:** Are there major water requirements for this new energy plant/operation? If so, are there competing interests for water in the area, and is there any likelihood of water scarcity over the foreseeable future?
3. **Consumer Products:** Are your products in a price inelastic market -if so how would an increase in water costs impact market share?
4. **Transportation:** Will shipping via water become more expensive with environmental concerns requiring double hulls for oil, and ballast controls?



### Health and the Environment

1. **Manufacturing:** Does your manufacturing process produce byproducts or waste that could impact employees or the surrounding community in a negative manner?
2. **Energy:** Are there significant health impacts resulting from an investment's energy consumption or generation? Are there emerging health issues related to the effluent or emissions resulting from the energy production? A current example is the concern around mercury emissions from coal-fired generation.
3. **Consumer Products:** Does your product fit with evolving societal health-related expectations, preferences and trends? Examples include the rapid growth in markets for organic foods.
4. **Transportation:** Is your business model sensitive to fuel costs? Prices for fuel can be impacted by health concerns which lead to greater regulation and higher prices. Examples include requirements for reduced sulphur in gasoline and diesel fuel.



### 8. A New Set of Relationships for Corporate Functions

Corporations are a microcosm of society. Within each company, there are different perceptions of which group or department is best ‘plugged in’ to the company’s overall business function and goals. Often times, a Sustainability department is considered to be populated by ‘do gooders’ who would put the interests of the environment ahead of the interests of the company. In contrast, people in Sustainability departments would argue that they are looking out for the long term interests of the company, and are therefore the stewards of its perpetual success.

An understanding of organizational behaviour related to companies tells us much about how best to institute and initiate change in a large enterprise. For an expanded view of risk for capital investments to come to pass, it will likely require leadership from the CEO, Board members, the CFO and the Sustainability executives. In comparison, implementing a corporate sustainability strategy will likely be an easier task to accomplish in companies, since it falls into the strategy category which already incorporates non-financial issues. However, for capital investments, the responsibility for risk typically lies in the finance departments which are often loath to complicate already complex financial models and evaluation tools used to choose between capital allocation options.

Two things likely need to happen to better incorporate sustainability into risk management: sustainability groups need to increase their financial acumen, while other functional groups need to increase their familiarity and comfort level with non-financial drivers of value and risk. Lacking the ability to translate environmental or social risk into financial terms has typically reduced the influence of sustainability groups’ capital investment decisions. Instead they have been focused on environmental management, stakeholder outreach and other tasks related to managing a company’s intangible assets.

Going forward, sustainability groups should be tasked with providing risk management services to core business capital decisions, in particular when they involve long term placement of capital. It would be incumbent on Sustainability groups to ‘staff up’ with people who understand both intangible value and risks as well as traditional financial risk parameters.

#### **Sustainability groups should begin demonstrating fiscal responsibility through:**

- Communicating with finance departments regarding environmental accruals and liabilities on existing capital investments and assets,
- Attaching monetary value to non-financial returns and expenditures resulting from environmental and non-environmental core business activities,
- Integrating environmental issues into engineering – capital investment product/process design, life-cycle design,
- Integrating performance bonuses that are related to reduced sustainability losses for capital investments, or more simply put, expectations of risk management efforts on the part of sustainability and finance staff.

*Company examples: Forward-looking sustainability leaders, such as Suncor and Dofasco, have incorporated procedures whereby CFO's regularly test and investigate capital investment decisions with their company's sustainability champions.*

## A Sustainability Lens for Capital Decisions

### Board of Directors: Engagement and Good Governance

Sustainability leaders in companies also need to take it upon themselves to apprise their boards, and the rest of the executive teams of sustainability assessments or risk for new capital investments. This can be a challenge in some organizations hesitant to take unconventional approaches to issues.

Figure 8 below focuses in on the centre of Figure 6 and illustrates in greater detail the core of the decision making process and how a sustainability lens changes it through improved governance around sustainability risk considerations. The figure also shows how the sustainability function within companies needs to be integrated into the decision making process.

*In the UK, recent reports on corporate due diligence governance have recommended that audit committees or risk committees of the board be tasked with assessing the scope and effectiveness of the systems established by management to identify, assess, manage and monitor financial and non-financial risk. Many companies have set up separate risk committees or delegated responsibility for social and environmental risks to special committees, however lines of communications between these groups and more formal and established audit and risk committees are often insufficient to provide thorough due diligence.*

**Innovest**  
‘Managing non-financial risks’

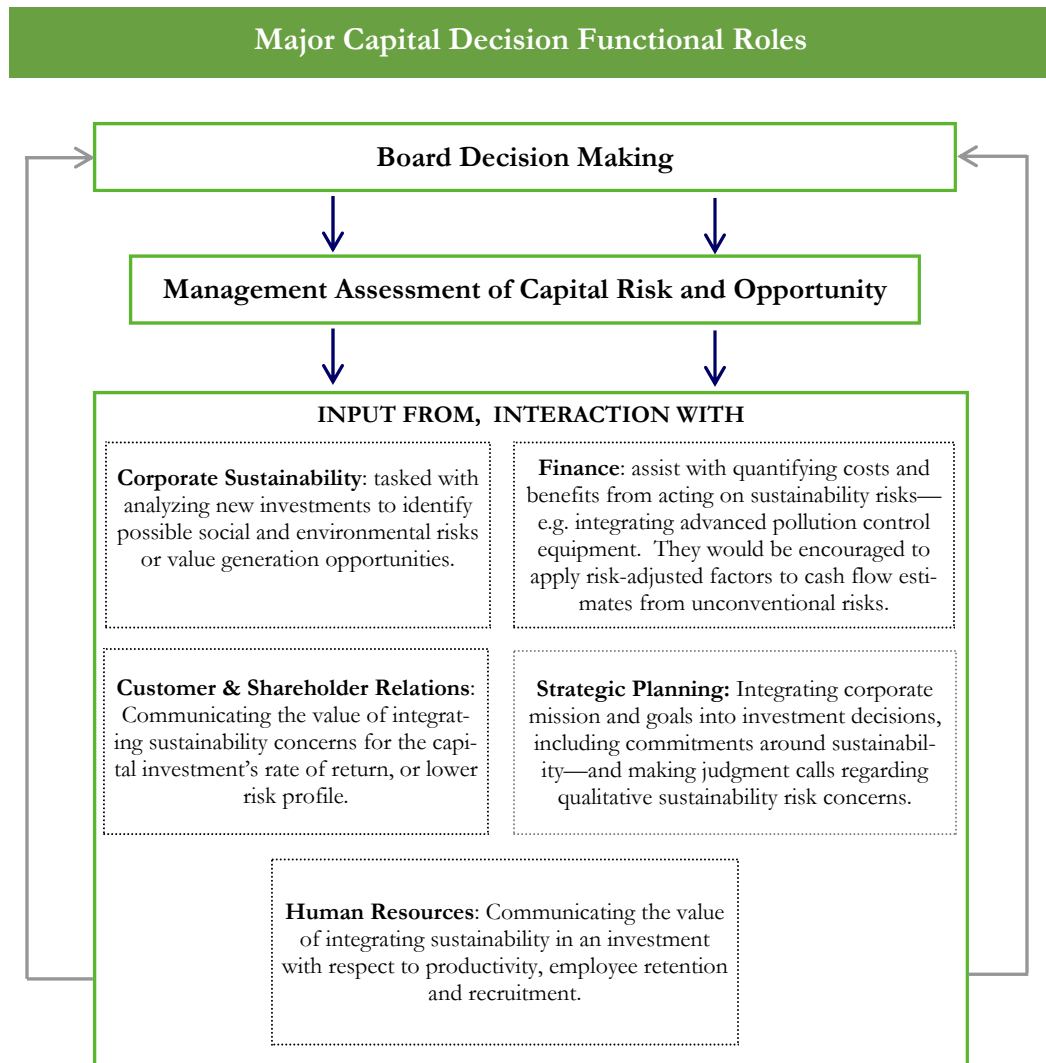


Figure 8

To prove good governance, boards in the future will likely need to demonstrate that they have considered these new, ‘non-core’ drivers of capital investment returns and value. As per the Sun-cor and Dofasco examples cited on previous pages, some companies are beginning to use their sustainability resources for improved risk management. In these cases there are several key factors which have elevated sustainability’s role within the company’s capital investment decision making process.

Figure 9 illustrates the multitude of drivers that will influence how seriously a company takes non-financial risks, or sustainability ‘mega-risks’ to their capital investments.



Figure 9

Regardless of why a company is most motivated to expand their view of risk when considering capital investment decisions, the kinds of skills required by the modern corporation to properly value and evaluate non-financial risks to long term capital are new and unconventional. They call upon the sustainability components of companies to redefine their role and advance their understanding of how non-financial risks and complex challenges affect returns on long term capital investments.

### 9. Conclusions and Next Steps

The intent of this report has been to advance the discussion beyond the point of WBCSD's Running the Risk report, to consider in greater detail and more specificity what the mega-risk issues facing capital investment decisions are. The report establishes the notion that a sustainability lens for making investment decisions would both improve the resilience of a particular decision, while also making for better and more defensible due diligence. These issues are increasingly important to a company's overall performance, as risks compound in form and impact, while societal and regulatory expectations around corporate disclosure, decision making and transparency expand at a rapid rate.

For companies to manage this rapid evolution in the 'rules of engagement' they need to develop sophisticated yet simple-to-implement approaches to managing an evolving operating environment. This report recommends that business judgment around capital decisions be improved by incorporate sustainability. It does not advocate new metrics, tools or management systems. That discussion can perhaps be held next. The EXCEL perspective is that it's important to first concentrate on the overarching process changes that need to take place in a company to incorporate a wider non-financial, yet material view of risk.

As companies consider new capital investment decisions, mega-risk issues such a climate change, water, biodiversity and health and the environment should be considered as sentinel areas that need to be better understood and planned for so as to better prepare investment for a changing world. Value needs to be considered as well. If these risks present an image of what the world will be facing over the next half century or longer, how does a company continue to grow and earn a profit in such an environment? Business opportunity needs to be wrung out of the issues as society changes and modulates to manage their inherent dangers and upsides.

Section 7.1 of this report provided some simple, straightforward examples of the types of inquiries that should be made in order to incorporate sustainability risk and opportunity considerations into sector specific capital decision making. The EXCEL Partnership companies already incorporate many of these lines of inquiry into their processes. However, we continue to learn new approaches to improving our sustainability decision making and 'lens-shaping'. EXCEL invites other companies, and business organizations worldwide to join the discussion on how best to deal with sustainability mega-risks so as to ensure long term sustainable economic growth across the planet.

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Appendix A

Profile of the EXCEL Partnership



EXCEL (Excellence in Corporate Environmental Leadership) is a unique learning partnership of major Canadian corporations who are committed to environmental and sustainable development leadership through continuous improvement of environmental performance. Membership is by invitation only. The Partnership was founded in 1995.

A powerful interactive peer group for senior environmental and other corporate executives, members of EXCEL:

- Exchange ideas and experiences to improve the efficiency and effectiveness of corporate environmental and sustainable development activities,
- Interact with high-level federal government officials and ministers to promote public policy in recognition of corporate environmental excellence,
- Assess and share knowledge on innovative practices with leading North American and European corporate sustainability practitioners,
- Engage with and influence capital-market leaders to promote the concept of share value that rewards environmental performance,
- Develop the business case on how sustainable-development leadership delivers tangible results for shareholders, and
- Benchmark performance against a peer group of companies to maintain competitiveness.
- The EXCEL Partnership operates under the aegis of the GLOBE Foundation and is managed by The Delphi Group. EXCEL has a formal affiliation with the World Business Council for Sustainable Development.

### **EXCEL Corporate Representatives**

- Adele Malo, Vice President, Sustainable Development, Ontario Power Generation
- Francine Dorion, Vice President, Environment, Health & Safety, Abitibi-Consolidated
- Scott Duego, Vice President, Sustainability, Teknion Furniture Systems
- Jennifer Hooper, Director of Corporate Safety, Environment, Health & Security, Dupont Canada
- Ron Nielsen, Director, Sustainability & Strategic Partnerships, Alcan
- David Lewin, Vice President, Sustainable Development, EPCOR
- Brian McConaghy, Vice President, Health, Safety & Environment, TransCanada Pipelines
- Brian Stevens, Vice President, Environment, Health & Safety, EnCana Corporation
- Bob Page, Vice President, Sustainable Development, TransAlta Corporation
- Normand Pellerin, Assistant Vice President Environment, CN
- Bob Kinnear, Vice President, Human Resources & Administration, Norbord
- Luc Robitaille, Corporate Manager, Environment, St. Lawrence Cement
- Bruce Sampson, Senior VP Strategic Planning & Sustainable Development, BC Hydro
- Vasudha Seth, Director, Sustainable Development, Dofasco

For more information see [www.excelpartnership.ca](http://www.excelpartnership.ca) or contact Christopher Henderson, CEO of The Delphi Group at (613) 562-2005.





**Appendix B**

**Profile of the EXCEL Secretariat**



## The Delphi Group

### Who We Are



Delphi has emerged as Canada's leading strategic consultancy firm to business leaders and policy makers for the environment and clean energy sectors. Delphi integrates strategic insight, information, technologies and capital to help private companies, governments, and organizations with creative solutions to manage risk and the process of complex change and to move towards a more competitive and sustainable future. Our ability to both create and seize global opportunities is why we are uniquely positioned as a preferred partner to provide value-added solutions.

Delphi centers its work on:

- Achieving a future that balances environmental, economic and social sustainability is fraught with **Complexity**.
- **Creativity** is the hallmark of how we add value for clients with consulting assignments, or on projects and ventures with partners.
- We help clients **Change** in the direction of sustainability, and derive business advantage and social gain from this future.

### Business Units

Delphi has extensive capacity to provide insight, develop solutions and manage complex environment and clean energy assignments. Highly talented and experienced professionals lead Business Units in the areas of:

**Health & Environment:** Developing new thinking to integrate health & environment issues—from policy to stakeholder relations—resulting in environmental and public health benefits.

**Corporate Sustainability:** Advising corporations and governments on enhancing business competitiveness through proactive environment and sustainability strategies, practices and policies in the North American marketplace.

**Sustainable Energy Strategies:** Facilitating the transition towards clean energy markets and the application of innovative environmental and clean energy solutions to meet the needs of a rapidly emerging carbon-constrained world.

**Climate Change:** Delphi devises climate change solutions for Canada and the world through: the crafting of strategies for policy and program design; stakeholder engagement; public education and outreach; and developing and managing Clean Development Mechanism (CDM) projects.

**International Development & Environmental Services:** Delphi has also established a specialized services group that combines our strengths with environmental issues, clean energy and climate change to our regional work in the Americas and Asia.

## Globe Foundation of Canada



The Globe Foundation of Canada is a private, non-profit foundation created in 1992 to further the concept of the business of the environment. The GLOBE Foundation works with environmental firms, corporate environmental managers, and financial institutions to turn environmental problems into business opportunities and to capitalize on international opportunities in the business of the environment.

With a vision to drive environmental business to new heights, GLOBE has taken on a diverse range of projects since it was established in 1992.

The GLOBE Foundation organizes the GLOBE Series of biennial conferences and trade fairs, which provide an ideal forum for dialogue and partnerships and have emerged as among the most well-known and prestigious business and environment events in the world.

GLOBE has also been involved in a number of highly successful education and training initiatives and continues to manage national and international projects, all of which utilize our expertise and experience in the business of the environment.

Through knowledge and innovation, our experienced, multi-disciplinary team has established GLOBE as a preferred partner in providing value-added solutions to ultimately leverage environmental challenges into business opportunities.

INOP	11008.48	UOLU	289,915.01
UTIL	-1.99	UVOL	112,745.81
TRAN	-23.70	DVOL	134,141.61
		TRIN	.77

INRS	LSS	CR	HAP	AVE
	9%	11%	13%	