

# Measuring Business Value and Sustainability Performance



Enhancing business value from the selection, measurement and analysis of Corporate Sustainability Performance characteristics.

By David L Ferguson

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### Abstract:

The integration of corporate sustainability within operations remains an important and fundamental challenge for business. This paper first consolidates and then builds upon the EABIS-supported activities of Cranfield School of Management with business practitioners. It focuses on the performance and evaluation criteria relating to determining corporate responsibility (CR) value.

The paper begins by categorising components of CR in terms of decision-making levels and business case requirements. It then describes a methodology for establishing CR issues with the prioritisation of stakeholders before linking this relationship onto business benefits and shareholder value drivers. Using illustrated models and worked examples, sections within the paper provide further practical advice and guidance for developing and populating elements within the framework. Additional sections then complement the application of the CR Value-chain framework, with a chapter on performance measurement that explores the key performance measure characteristics required to underpin the performance element of the framework. The final chapter describes decision-making support tools, such as financial appraisals and risk evaluations, which also underpin the shareholder value approach and should be integrated within this corporate sustainability value management framework.

A key purpose of this approach is to support the integration of sustainability performance management processes and systems within business practice. It explores methods for making more explicit the issues surrounding CR and financial value. It also provides useful approaches for helping businesses select, measure and evaluate performance for internal CR strategies, policies and processes. Some analytical methods are considered for identifying the costs and benefits from sustainability-related issues, projects and new ventures, including discussions with regard to harmonising existing business functions.

This paper serves to provide an early prototype for future approaches towards integrated sustainability performance management systems.

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### Introduction:

Corporate Responsibility (CR) is making its transformation into a more integrated corporate sustainability approach. From predominantly philanthropic or community-orientated investment programme beginnings, operating at the fringes of the company's activities, CR is gaining greater credence for supporting strategic and operational management decisions with regard to future practices, products and services for the company, as the sustainability agenda and value creation becomes more apparent for business.

Issues such as climate change, are increasingly being recognised as significant for business, with expectations that these will have a distinct impact on shareholder value over the next five years <sup>1</sup>. Chief Executives are increasingly aware of the need to incorporate environmental, social, and governance issues (ESG) within their core business practices as strategic competitive objectives. Through increasing media attention and government interventions towards sustainability issues, alongside an increasing awareness amongst Western consumers, the strategic fit and alignment of CR within business is increasingly clear.

For some of the more enlightened companies, the sustainability agenda is intended to become the heart and soul of the business model in the future, and a range of companies are now seeking to create a more genuine sustainable differentiation and competitive advantage from CR. A number of global and multi-national companies are emerging with pioneering and demonstrable value-adding strategic CR credentials, including Marks & Spencer Group (high street retail), Interface (commercial flooring), Unilever (fmcg conglomerate), Novo Nordisk (health care), Toyota Motors (automotive), Alcoa (metals and mining) and BT Group (telecommunications)<sup>2</sup>.

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Even with a corporate vision that includes sustainability, and senior management's holistic understanding and genuine commitment for developing sustainability within the company, the problem still remains however, that unless managers can understand and assess the components of sustainability which create value more explicitly, there is greater resistance towards implementing and managing CR due to its added complexity alongside other, more established (and possibly negative) practices within the business <sup>3</sup>. This requires a pervasive change of perspective, from believing CR to be an external requirement and additional task to deal with (or not) on top of existing duties, towards one that has clearly understood business benefits and specific values that justify internal adoption, adaptation and integration.

Although CR is becoming an important issue on the strategic agenda, there remain challenges and issues with regard to operationalising these strategic CR objectives within organisations. One reason for this is that of different perspectives and functional objectives of CR within what are effectively large and diverse business units. The advent of CR as a strategic business agenda item raises the question of how to determine operational business priorities, the most relevant values and the key areas for decision-making in relation to creating the most effective impact from CR-related business activities.

The key purpose of this paper is to explain how corporate responsibility performance measurement systems (CRPMS) can be designed and implemented, and to show how this process allows business to trade-off decisions that involve CR, whilst still catering for the need to maintain and create shareholder value and a profitable future for the business.

In order to make more effective business sense of sustainability in an organisation, management requires systematic and rationalised processes for identifying and dealing with sustainability within the business. This should encapsulate relevant criteria for sensing the issues, evaluating and

communicating the business case, and for establishing and reporting on the required performance criteria in terms of measures, management and targets.

The approach supports a move from a reactive mode of corporate behaviour (responding predominantly to past events and current incidents) towards a proactive mode where the organisation is more able to anticipate and adapt to relevant and contemporary CR issues. This incorporates a CR framework that supports, informs and enhances the CR business case for operations, whilst making the method for evaluating business performance more transparent and rational, so as to measure and assure over time that the right CR-related decisions are being made for all the right reasons.

This has been the focus of research undertaken and analysed by a team at Cranfield School of Management <sup>i</sup> from 2005 to 2007. It began with an action research project with EDF (Électricité de France) between 2005 and 2006, where a generic process was piloted and refined within an executive development programme <sup>4</sup>. This was followed by workshop activities with CR practitioners from member companies of EABIS, as part of the wider EABIS supported project<sup>ii</sup>. For the purposes of this paper, these elements have been expanded and further developed.

Although there are differences between measurements at the macro enterprise level of performance and those undertaken at project levels, this methodology is flexible and adaptive in its application to enterprise-wide, business-unit-specific, plant-specific and project-specific levels.

Though this paper has attempted to consolidate a number of key considerations concerning the identification, assessment, analysis, performance measurement and financial value linkage with regard to operationalising sustainable

<sup>&</sup>lt;sup>i</sup> Dr Lance Moir (Department of Finance and Accounting), Dr Mike Kennerley (Centre for Business Performance) and David Ferguson (now with Doughty Centre for Corporate Responsibility). <sup>ii</sup> Workshop participants - EDF SA, Unilever, Heineken, Holcim and EDF Energy.

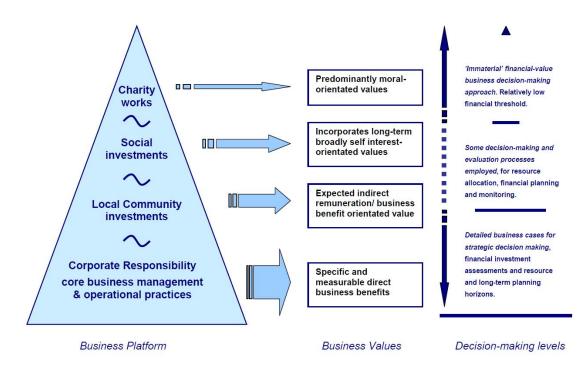
performance within a company, it is by no means fully comprehensive, considering the emerging and contemporary nature of the subject. It aims to be a useful reference point for the development of more systematic approaches to what is a complex, dynamic and uncharted aspect that business is expected to manage alongside traditional business functions.

The integration of CR principles within the company has been identified as one of the strongest predictors of social performance  ${}^{5}$ , and the methodology of this paper provides a practical and pragmatic framework to help achieve this. Using the methodology and tools within this paper will help CR practitioners communicate the value and worth of sustainability aspects to general managers, as well as helping strategy, risk management and financial professionals understand how better to internalise sustainability within the company's existing management systems. This is approached by first describing the relevance of different business benefit and decision-making approaches within the *CR Pyramid of Practice*, before summarising the key stages and tools involved in the application of the *CR Value-chain Process* methodology. Using examples and illustrations, the remaining sections of the paper describe the practical application of the *CR Value-chain Process* stages in more detail, and are accompanied by scoping performance measurement, risk management and financial value assessment approaches.

# 1. CR Pyramid of Practice and Value-chain Process – a summary

The CR Pyramid of Practice was developed from a practitioners' focus group comprising EABIS members from five different international companies, and facilitated at Cranfield School of Management. Its aim was to develop a generic understanding between all parties as to the complexity and variation of CR perspectives in relation to the firm. It sought also to derive some explanation for key differences between the different company-centric CR perspectives in relation to the business value base, decision-making levels and the level of performance evaluations associated with each of the CR-orientated aspects. The different perspectives of CR taken by the business therefore led to different emphases on the values of the company and the subsequent level of decision making and performance evaluations regarding the CR spectrum – from public good to operational processes.

The *Corporate Responsibility Pyramid of Practice,* illustrated below, was developed as a result of the focus group discussions. Using a spectrum of CR-related activities, it has similarities to the Community Investment framework model of the London Benchmarking Group <sup>6</sup>, with a distinct re-orientation of the framework to expand upon the variations in business values and the corresponding elements of an organisation's decision-making and evaluation-process levels.



### Pyramid of CR Practice and Values

The consensus reached by practitioners was that four distinct strands of CR are being conducted by an organisation, namely charity works, social investments, local community investments and core company activities. The challenge for CR is developing ways to progress more effectively from the social investment and local community stages of credibility and cognitive perception into the broader, larger area of the impact of core business practices, i.e. spreading further around the bottom of the pyramid illustrated previously. For the businesses present at this workshop, this base section represents the future of CR and sustainability for a company.

Beginning at the top of the pyramid, although not the most important part, is the predominantly philanthropic gesture of *charity work* contributions. These are not expected to have many explicit business benefits (neither in the shareholder-value sense of the word nor from the macro-level, company-activity centred CR perspective) and as such, these activities have a relatively low financial relevance for the company as a whole when compared with other large-scale asset investments and overall revenue figures.

The second level involves what is referred to as *social investments*, targeted as specific social causes whereby there is an expectation of a basic social benefit from which the company may generate indirect value, e.g. national unemployment re-skilling initiatives. The business case aspect here does become more involved, as resources are applied to loosely establish self-interest benefits from the initiatives, e.g. a greater and more enabled workforce pool.

The third strand, which has an even closer proximity to the organisation's values and interests, is *community investments*. Here there is a shift towards greater anticipated indirect business value, e.g. a local health centre, recreational and wildlife projects, or local business development support, which can more directly result in improved employee and/or family health (e.g. reduced absenteeism), societal and ngo-related reputation (e.g. improved social standing attractiveness), or more professional and effective local business capacity (e.g. improved trade supply and local skill-base). Within this category there is a stronger graduation towards the financial planning, resource allocation, programme evaluation and decision-making focus than the social investment initiatives described earlier.

The fourth strand relates to *core business* practice and operational activities. Here lies the domain in which there is most scrutiny with regard to the business value and decision-making focus of the CR function. It is here that most of the business resources and financial implications reside. Therefore the CR elements are anticipated to be assessed alongside the company's strategic decisionmaking and financial investment decisions, and in relation to evaluations for resource planning and long-term planning horizons. For academics and practitioners alike this is the 'crunch' area for CR within a company, due to the extent of impact, influence and contribution that operational activities can make to environmental and societal conditions. It is the area, however, where CR is perceived as needing to compete with other operational priorities, and at this stage in CR's evolution, the challenge is for it to be sufficiently integrated within the operational activities and strategic perspectives of the business.

Although the *CR Pyramid of Practice* is a relatively simplified model (it does not for example include cause-related marketing campaigns), the companies participating in this research process have already adopted it as a method of communicating the CR spectrum to others within their organisation.

The second key output from the Cranfield School of Management research initiative is in relation to what is termed the *CR Value-Chain Process*. As discussed, this was developed and piloted by the Cranfield team in conjunction with EDF (Electricité de France) as an action research initiative. The focus has been on the establishment of a method for assisting in the development of the business case of measurement for CR within the strategic and operational aspects of the business. As such, this methodology acts as a complementary approach for the fourth strand of the *CR Pyramid of Practice*.

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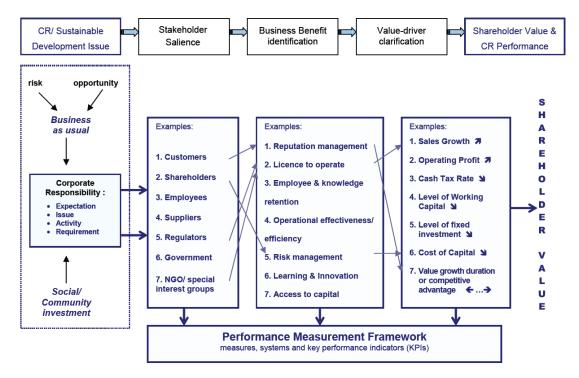
The *CR Value-Chain Process* functions on the premise that shareholder value and societal benefits can be achieved simultaneously, and are not, in the medium- to long-term, necessarily contradictory. It also assumes the pragmatic need to evolve CR in relation to the company's improved understanding of the interrelationships between CR and shareholder value, and create an improved capacity and ability of those within the organisation to make effective CR-related decisions, improve the allocation of resources and thereby develop a more informed systematic perspective for establishing levels of business performance through an improved CR performance. An overview for the process is illustrated below.



As the strategic framework illustrates, the *CR Value-Chain Process* incorporates the understanding that multiple stakeholders are involved in the success of the business, and that different stakeholders may be concerned about different CR issues. As such, the CR issues pertinent to the company require the development of stakeholder salience around these issues. By developing an understanding of the issues, needs and contributions from these stakeholders, a clearer understanding emerges as to how these stakeholders (who represent particular CR-related interests) articulate the impacts of the company and how they also can affect the benefits to the business. The company also needs to map such benefits onto internal value-drivers for the business, which in turn will lead to more robust and progressive shareholder value. Another important effect is the provision of an improved societal contribution by the company, as compared to its previous stance.

In order to explain this process from the practitioner perspective, an operational framework for the *CR Value-Chain Process* has been developed. As illustrated,

this operationalised framework encapsulates the aspects of normal operational and business unit functions, as well as strands two and three from the *CR Pyramid of Practice* regarding social and community investments.



The analysis of the core functions can be viewed from both the risk and the opportunity characteristics of CR. What may at first be identified as potential threats to 'business as usual' activities can also reveal opportunities for levering enhanced organisational capabilities relating to first mover advantage, organisational learning, and the improvement of robustness for business models and management systems into the future. This includes developing new skills and processes, new or adapted products and services, lower operating cost exposures, strengthening the brand value-base, improving stakeholder trust and relations, and the reduction of future potential litigation and regulatory exposure. From environmental scanning, social issue assessments and stakeholder engagement, the various expectations, issues, activities and requirements of the company (and stakeholders) can be determined. These, in turn, should be clearly linked to the perceived business benefits and their associated value drivers.

The linkages and mappings need to be assessed and underpinned in terms of what types of measures and evaluations can act as appropriate key performance indicators (KPIs). These KPIs must then be incorporated within the company's performance management system of evaluating, assessing, and targeting (and their re-assessment) in terms of strategic aims and operational effectiveness, as well as determining their contributions to shareholder value drivers and the establishment of the societal, socio-economic and environmental outcomes they seek to address.

The remaining section of this paper will provide more in-depth instructions on how to use the operational framework and define, in greater detail, the steps involved in the strategic framework. It is split into three sections, the first explaining the identification and development of the CR stakeholder salience process, the second detailing the stages for linking the business benefit and clarifying the value-driver aspects, with a third highlighting approaches to developing measures, establishing the KPIs and determining the values and benefits expected from such CR activities.

# 2. Applying the CR Value-Chain Process

In this section, a more detailed explanation and step-by-step instruction for applying the CR Value-Chain Process is described. This will accommodate the strategic framework as described below.

### Strategic Framework



### 2.1 CR Issues & Stakeholder Salience

Stakeholder management is familiar to business, but using stakeholder management for CR and linking it to clear and robust business value-creation is new. Within CR, stakeholder management can be turned from a relatively reactive, defensive and ad hoc management response, into a more systemised and proactive tool that helps consolidate CR-orientated business issues and can act to support the eyes and ears of the organisation.

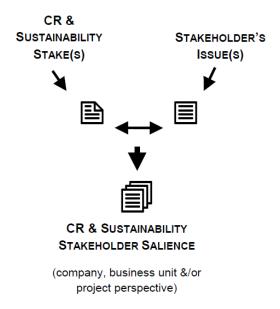
As illustrated, the term stakeholder is a broad church for those that 'can and do interact with the firm', and 'can affect or be affected by the firm'. Stakeholder analysis may be at the enterprise, business unit or project level. Even within a specific stakeholder group, there can be differences with regard to focus and preference in relation to competing, and alternative issues and opportunities. Collating and differentiating between stakeholders and issues is an essential sense-making

### Stakeholder Profiles

- Customers corporate
- Customers individual
- Employees
- Regulatory Bodies
- Government Departments
- Trade Unions
- Suppliers
- NGO's
- Financial Providers
- Shareholders
- Parent Company
- Competitors
- Joint Ventures
- Trade Associations
- Membership Bodies
- Local Communities

component of the stakeholder management process.

There are two ways to approach the CR and stakeholder salience stage, and in practice it will be an iterative process involving both aspects. It is worth capturing the development of both approaches on a master list as they are being applied, as CR Issue and Key Stakeholders' registers. As a check these should be reflective and counter-supporting, i.e. for every CR Issue there should be at least one



stakeholder representing the issue and for every stakeholder, they should be identifiable with at least one key CR issue. From the in-house perspective, it can be appropriate to look at running these in parallel, with each being able to interface with the other (as illustrated).

### 2.1.1 CR/Sustainability Issues at Stake

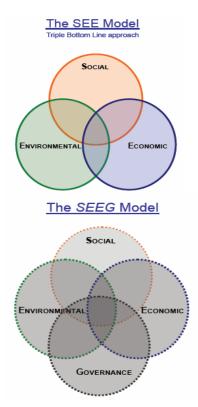
Although the key approach is the management of the CR issue with regard to organisations and individuals who have a stake in the issue, the use of a method for identifying the CR and Sustainability issues as a complementary approach to this process is very useful. To this end, it is suggested that all the operational and strategic aspects, developments and challenges that are generally known from experts and senior managers around the company are collated. The next step is to explore which of these are most relevant for the CR and/or Sustainability agenda <sup>III</sup>.

<sup>&</sup>lt;sup>iii</sup> The term CR (representing Corporate Responsibility or Corporate Social Responsibility) and Sustainability are in this case used inter-changeably. There are references to differences between these terms, however for the purpose of this methodological approach that is neither a strong concern nor a priority issue for this paper.

CR and Sustainability issues come in all shapes and sizes. Some issues will be more established than others with regard to different specialists and experts within the company, who have themselves interacted with different stakeholders, including e.g. sector media. These issues should be relatively straightforward to collect on the macro level and business unit level. One of the reasons for employing this tool within the CR Value-chain Process (CRV Process) is that sometimes the orientation of stakeholders around a CR issue or 'stake' is a better way to organise and manage the collection of data that can emerge from the different sources <sup>IV</sup>. For the CRV Process, it is also essential to capture the specific stakeholders related to each of the themes. The grouping of different stakeholders with similar or interrelated issues and stakes can help better describe the dynamics around an issue and improve the ability for adopting the right approaches to enterprise-wide aspects; rather than using a stakeholder by stakeholder approach.

One familiar approach to categorising the stake or issue is using the Social, Economic and Environmental thematic model, with the broad categorisation that social relates to community and individual welfare (social capital), the environmental to themes that relate to natural resources and ecosystems (natural capital), and economic that relates to the movement and distribution of monies and financial wealth (economic capital).

Although this is a popular model, it does inadvertently omit (and therefore separate) another growing area of significant importance within what can be described as CR and Sustainability, that of governance, especially



<sup>&</sup>lt;sup>iv</sup> As was the case in the action research activities of Lance Moir, Mike Kennerley and David Ferguson from Cranfield School of Management with management executives at EDF SA.

Corporate Governance. This term adds a further managerial business ethic dimension to a company's systems and processes, primarily focussed at Board level, but with increasing relevance to senior management and middle management activities.

As discussed, in relation to the practical use for this tool, it is probably easier to approach it from the themes and identify the stakeholders for each CR-related theme, adding an existing stakeholder in a new issue where multiple issues from different themes exist. This is represented in the expanded SEEG framework illustrated below, as applied to enterprise-wide scenarios; note that this can be used for project and business unit-based scenarios in much the same way.

# The SEEG Model

# enterprise-wide assessment in practice

# SOCIAL

<u>Welfare :</u> employee benefit & work-life balance – Employee, Trade Unions.

Ethical Procurement: supply-chain management, human rights & environmental standards – Suppliers, Customers.

<u>Safety:</u> H&S of employees, safety of the public with product/service – Employee, Trade Unions, Community, Public, Suppliers.

# Есономіс

<u>Fuel Tax Levy:</u> the added charge and tax payments for fuel surcharges – Government Agency (BERR).

Pension: the reduction in deficit - Employees & Parent Company.

Tax, Fines & Supplier Payments: timely and complete payments -Government Agencies (HMRI & Environment Agency), Parent Company, Suppliers.

# ENVIRONMENTAL

<u>Water Quality:</u> discharge into rivers and sensitive areas – Environment Agency, WWF/ Greenpeace, local community.

Energy consumption: direct & indirect energy purchase/ generation – Regulator, Energy Trust, Government Agency e.g. BERR & Energy Bill (legislation), European Union (re: ETS (emission trading system).

# GOVERNANCE

Board-level Corporate Governance & minority shareholder engagement.

Management systems compliance (ISO14001): EMS auditing, conformance and coverage.

Regulatory/ voluntary reporting procedures: water use/leakage and CO<sub>2</sub> emissions – Regulator. <u>Auditing Processes</u>: risk and performance - Shareholder.

It is important to create a clear distinction of issues within these broad themes. This can be achieved by developing sub-theme categories for the issue, e.g. Environmental - resource use - water, Social - employee welfare - health. A reference CR theme index is provided in the Appendix <sup>7</sup>. At the macro-level data evaluation stage, it is also worth data tagging the scope of relevance for the issue to the company, i.e. enterprise-wide, business unit, project specific. There are stakeholders for the CR issues who can now be identified at the sub-theme level which helps to clarify the types of stakeholders, the issues and the linkage to different areas of risk or opportunities for management.

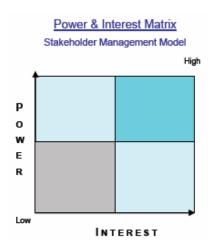
It is recommended that at least one secondary critique is applied as a revisit and verification for the thoroughness and completeness of both the CR themes and importantly the different types of specific stakeholders <sup>8</sup>, noting that stakeholders are not homogeneous, i.e. customers, employees, special interest groups, government departments are not the same within themselves.

### 2.1.2 Stakeholder Salience

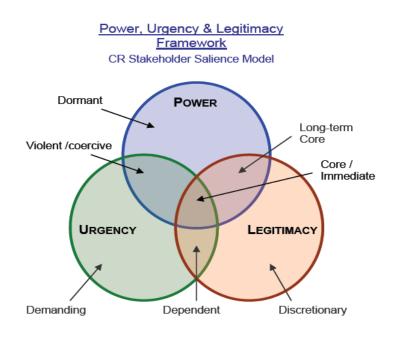
A fundamental approach for this methodology is the assumption that stakeholder salience and stakeholder management aspects are closely associated with defining the characteristics, effects and level of performance required for CR-related issues by a company. Stakeholders, however, can have different and at times opposing perceptions with regard to the CR issue. By focussing on the characteristics of the stakeholder and their perception of the issue, a more informed decision-making process can then be applied by managers.

Tools and frameworks for stakeholder salience have already been developed to explore a stakeholder's perspective with regard to the company. Two methods reviewed by the Cranfield team included the power and interest matrix <sup>9</sup>, and the methodology preferred due to added dynamics provided by the power, urgency and legitimacy framework developed by Mitchell, Agle and Wood (1997) <sup>10</sup>; both are illustrated.

The choice of framework is not really as important as the understanding associated with the description and context of the stakeholder, and to be able to employ a broad perspective from different internal managers with regard to the existence of the stakeholder (by name) and the levels and distinguishing features from their interaction with the organisation, business unit and/or project.



The Cranfield choice was to use the CR Salience Model. From an academic perspective and applied research viewpoint, this model brings added complexity with regard to a timescale of urgency and a sense of appropriateness towards a meaning for each stakeholder's legitimacy from the company perspective.



Stakeholder Descriptor	Salience Characteristics	General Examples (no context)
Dormant	Has considerable power, but no legitimate issue claim or pressing urgency.	Government Department Trade Body
Demanding	Brings urgency, but has no distinct power or issue legitimacy.	Media Trade Unions
Discretionary	Possesses a high level of legitimacy to the issue, but no real power or urgency.	Suppliers Employees
Long-term Core	Has both the power and legitimacy with regard to the issue, but brings no real sense of urgency.	Parent Company Institutional Shareholder Groups
Dependent	Has both urgency and a legitimacy, but little power.	Local Residents Conservation Groups
Violent/Coercive	Has some power and urgency, but little legitimate stake in the issue.	Disgruntled ' sacked' employee Activist Special Interest Group
Core/Immediate	Has all the characteristics of power, legitimacy and urgency combined.	Government Regulatory Body Major Customer Group

As illustrated, this model can clarify stakeholders into seven categories based on the three characteristics. Those with overlapping characteristics tend to have greater salience with the company. The priorities at first appear to be the core or immediate stakeholders, long-term core stakeholders, and the dormant 'sleeping giant' stakeholders. Care should be taken with the violent or coercive stakeholders as they can re-align or lobby a dormant stakeholder and change the stakeholder relationship landscape. The feature that stakeholder networks and characteristics can vary over time should be considered for other stakeholders. Therefore it is important to realise that any stakeholder mapping is not cast in stone and should be repeated to reflect changing socio-political environments and stakeholder networks. Other methods worth considering include analysing the stakeholder in terms of their Influence (on the firm or issue), their Activeness (on the issue or with firms) and their Contribution (input to the firm or the issue). Another company uses a scoring framework of Impact of Firm on Stakeholder (1-5), Impact of Stakeholder on Firm (1-5) and the Firm's Capacity to Deal with the Issue (1-5).

The ranking aspect is achieved by multiplying these up and scoring from 125 maximum (5x5x5)<sup>11</sup>. Each of these models has its limitations. The 2x2 matrix is

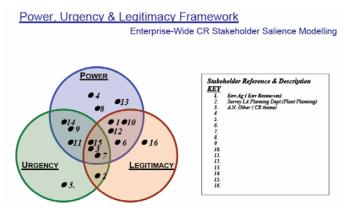
CR Issue	A <u>Company</u> IMPACT ON Stakeholder	B <u>Stakeholder</u> IMPACT ON Company	C <u>Company</u> Capacity to deal with CR Issue	TOTAL
	(1 -5 highest)	(1-5 highest)	(1-5 best)	(AxBxC) (prioritised)

simpler to understand and apply but may not capture the complexities of stakeholder categories and their relationships to the company. The salience model, being more complex, is less easy to apply, though it does help describe the richness of stakeholder variations better.

The usefulness of all the models is fundamentally limited by the perception, objectivity and knowledge of those applying them, with regard to placing and/or scoring the stakeholder and for assessing the stakeholder engagement level with the company. To this end, consensus building can assist in developing a more robust stakeholder model.

With regard to the power, urgency and legitimacy model, the types of outputs are described in the following illustrative example. These outputs should be

agreed with a number of people who are close to the issues and the stakeholders. This is perhaps best achieved within a workshop environment, so as to reach consensus and general



conclusions from the combined perception of CR stakeholder salience.

Although, the discussion and dialogue with regard to Power, Urgency and Legitimacy were useful in helping realise different characteristics of the stakeholder, one of the limiting factors for this model (that is better addressed from the simpler 2x2 Power & Interest matrix and the other examples provided) is the ability to prioritise from a large number of stakeholders. It was realised that a sense of scale was required which allowed for the prioritisation of stakeholders and their CR-related issues, challenges or impacts. This is illustrated in the example below.

Stakeholder	CR/Issue description	Power rating (50%)	Urgency rating (25%)	Legitimacy rating (25%)	score (% +)	Rank
1. A.Name		7	n.a.	4	5.5	2
2. A.Name		n.a.	5	7	3.0	5
3. A.Name		6	4	8	6.0	1
4. A.Name		9	n.a.	n.a.	4.5	3
5. A.Name		n.a.	9	n.a.	2.25	6
6. A.Name		5	n.a.	5	3.75	4

Using weighted scoring scale to prioritise Stakeholders and their CR issues

Whatever method is used, one should be at the stage of having a prioritised list of stakeholders, orientated around key CR issues and themes that are the most relevant and urgent for the company (business unit or project). The next stage is to clarify the relationship, not only in terms of what stakeholders want and need in relation to the company's resources with regard to the issues' impact, but one should be looking to determine what the company anticipates or expects from each stakeholder in return for responding to the needs and issues. The expected output from this stage is illustrated in the example below.

lssue No.	CR theme (SEEG)	Cr sub- theme	CR description	CR rank	Comment	Stakeholders
1	Environment	Energy Efficiency	Specific emissions/ investment /law/ requirement Factory C.	1	In Budget programme and pilot for other plants – Climate Change strategy.	
2	Social	Health & Safety	Traffic around the plant C, B & F.	6	Had 3 fatalities and 4 accidents in local and national papers.	
3	Environment	Water resources	Abstraction rates and water temperature discharge at Plant B.	12	Had repeat fines from Plant B, new laws will be even tighter.	
4	Environment	Renewable Energy	Planning permission for retrofitting Solar at all Plants in Country B.	22	Planning changes and deferred tax for eco- investment.	
5	Governance	ISO management systems	ISO14001 compliance in country C.	2	Only 80% coverage for country C, planned 95% achievement achievable.	
6	Social	Occupational Health	Aids & HiV medical support programme in Country A.	8	Partnership developments with competitors and WHO.	
7	Governance	Management Audit process	Risk Register audits for Sustainability Vision & objectives.	11	New process to establish CR adoption in key risk registers. KPMG sampling and a pilot.	
8	Economic	Tax & Pension	Reduce pension deficit and restructure for climate levy tax.	4	Significant deficits, government ask for reduction to x%. Levy next year in country B.	

### Prioritising CR/Sustainability issues and linking with stakeholders

### 2.1.3 Illustrating the CR & stakeholder Salience Perspective

Having identified and prioritised the stakeholders around different CR-related stakes, the next stage of the process is to investigate and clarify the stakeholders' wants and needs (SWANS) and the businesses' (our) wants and needs (OANS), based on the work of Neely et al (2002) <sup>12</sup>. The aim is to establish the stakeholders' requirements of the company concerning the CR-stake and identify what the company would expect to gain from each stakeholder. This is an essential stage, not only in terms of developing links to the business benefits more explicitly, but also in the development of measures or measurement systems to establish the effectiveness and performance management of the prioritised areas, and in the context of the stakeholder relationship, as illustrated below.

### Example Stakeholder & Company WANTS & NEEDS Table

Stakeholder	Stakeholder WANTS/NEEDS	Company WANTS/NEEDS	Performance/Outcome Elements/Areas
Local Community	Employment and training.	<ul> <li>Productive/loyal operational staff.</li> </ul>	<ul> <li>Preferential local employment rates.</li> <li>Steady/Improved productivity.</li> </ul>
Regulator	Lower water abstraction & high quality discharge.	Consent to operate, achieve a long term fixed/reduced rate.	<ul> <li>Steady abstraction rates - (reduction/interruption rate).</li> <li>Lower water discharge fines/notices/ checks.</li> </ul>
Government (EU Directive)	Lower emissions from energy units/plants.	Less restrictive methods for reductions.	<ul> <li>Emission reduction/ investment.</li> <li>Less restrictive process/ methods.</li> </ul>
WWF/RSPB/ local wildlife trusts	Improved wildlife conditions to neighbouring building & factories. Partnership projects for restoration.	<ul> <li>Improved community relations.</li> <li>Co-operative support/ recognition for activities.</li> <li>Employee participation.</li> </ul>	<ul> <li>No. of local participants/ employees participating in media promotions.</li> <li>Data of improved wildlife and eco-system at sites.</li> </ul>
Local Community	Less environmental pollution (noise & air quality). Communication about levels/issues.	<ul> <li>Less media-related complaints.</li> <li>Flexibility for extended operation times.</li> </ul>	Baseline and performance measures – noise / air quality.     Reduced media exposure local/national.
Financial Community	Steady, good returns on investments & R&D.	<ul> <li>Flexibility in some eco- investment profiles ROI (risk reduction).</li> </ul>	ROI/lifecycle payback performance of eco- investments.

with measurable Performance Attributes

An example from the earlier action-research activities identified the number, issue type and level of severity of correspondence between the company and the regulator as a new contextual measure of performance. From another case with regard to some R&D initiatives, it was realised that the skill type and numbers of local employment opportunities would be relevant to a distant yet influential stakeholder, but they had not been incorporated within the project scope or performance evaluation criteria. The benefits of a more systematic, reflective process help to crystallise the relevance of the issue from different perspectives in a way that can be translated into more meaningful business-orientated terms and improve the relevance, discovery, understanding and business benefit aspects.

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### 2.2 Business Benefits and Value-Driver Identification

This section highlights the key business benefits identified from sustainabilityorientated activities and, using examples, explains the financial value drivers that lead to shareholder value.

### 2.2.1 Business Benefits

Many leading companies and management consultancies have sought to develop more business sense around CR and sustainability issues, with a range of emerging business benefit categories specifically fitting the CR and Sustainability agenda.

KPMG's International Survey of Corporate Responsibility Reporting report analysed the business value drivers stated by the Global 250 company report <sup>v</sup>. The most common driver for sustainability was identified as general economic reasons (74%), and these were either directly linked to increased shareholder value or market share, or indirectly linked through increased business opportunities, innovation, reputation and reduced risk (39% reported improved shareholder value and 21% increased market share as an important reason for sustainability). 50% of the companies reported innovation and risk reduction as their main drivers. Additionally, about half the companies also listed employee motivation as their driver for CR behaviour, indicating the 'war for talent' issue, with approximately 25% of the reports referring to reputation or corporate brand as a driver for CR.

From the Cranfield research, this business benefit value driver is an important element to use in the methodology to help managers link the CR-issue and stakeholder management approach to that of the financial value drivers in the company. It helps to bridge the knowledge and communication gulf that appears

<sup>&</sup>lt;sup>v</sup> A CR Reporting Trends 2005 report conducted by the University of Amsterdam and KPMG Global Sustainability Services.

to exist between the financial community, CR practitioners and operational management staff.

As illustrated below, the different business benefits can be orientated around either a risk-orientated context or an opportunity-related perspective, under the general management practice of minimising risk and maximising opportunity to create lasting business value <sup>13</sup>.

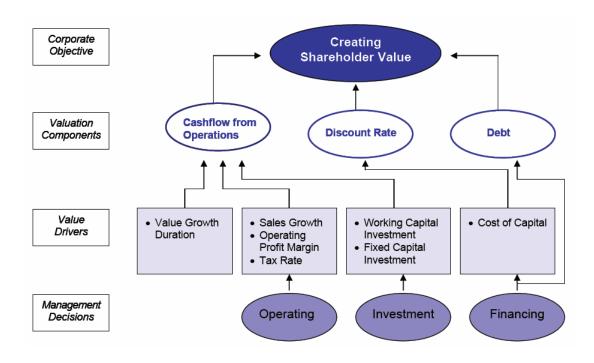
<b>Risk-orientated Factors</b>	<b>Opportunity-related Factors</b>
<ul> <li>risk portfolio management</li> </ul>	<ul> <li>increased access to capital</li> </ul>
<ul> <li>retaining the best people</li> </ul>	<ul> <li>attracting the best skilled people</li> </ul>
<ul> <li>maintain employee motivation and productivity</li> </ul>	<ul> <li>increasing employee satisfaction &amp; loyalty</li> </ul>
<ul> <li>protecting the corporate brand</li> </ul>	<ul> <li>providing staff development opportunities</li> </ul>
<ul> <li>maintaining quality in oppressive market conditions/ supply-chains.</li> </ul>	<ul> <li>building the local and/or international brand</li> </ul>
<ul> <li>protecting licence to operate</li> </ul>	<ul> <li>differentiating the company brand (peer positioning)</li> </ul>
<ul> <li>reducing costs of remedial works</li> </ul>	<ul> <li>expansion into new markets</li> </ul>
<ul> <li>maintaining operational efficiency</li> </ul>	<ul> <li>supporting new business development/innovation</li> </ul>
<ul> <li>reduced exposure to litigation and fines</li> </ul>	<ul> <li>improved customer loyalty and advocacy</li> </ul>
<ul> <li>reducing exposure to further regulation</li> </ul>	<ul> <li>organisational learning</li> </ul>
<ul> <li>managing insurance premiums</li> </ul>	• improved investor relations

### **CR/Sustainability Business Benefits & Drivers**

Having identified the CR-related themes and the associated stakeholder issues, and linked them to business or project activities and the associated business benefits, there is a need to understand more fully how this all links to financial value drivers for the business.

### 2.2.2 Financial Value Drivers

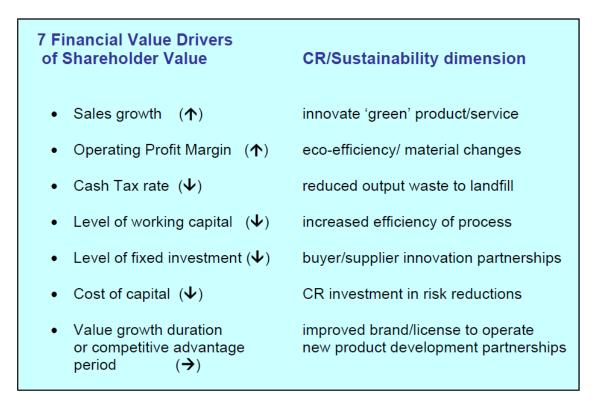
The financial value drivers model used is based on the well-known works of Rappaport <sup>14</sup>, who identified seven key company value drivers that are embedded within the operating strategy, investment strategy and financial strategy management decisions, each of which interrelates to the creation of shareholder value (illustrated below).



In summary, the operating strategy involves decisions related to sales growth, operating profit margin and the overall tax contribution. If the competitive situation of the company can be improved by offering an innovative 'green' product which is desired by the end consumer, and this can attract a greater premium, then this indicates a good operating strategy. Similarly, eco-efficiency measures that can lead to lower production costs and/or higher productivity will also correspond to a good operating strategy. Each will lead to an increase in shareholder value. Investment strategy management decisions look at working capital and fixed capital investments and are reflected in the cash flow from operations. Large capital investments are increasingly becoming focused on

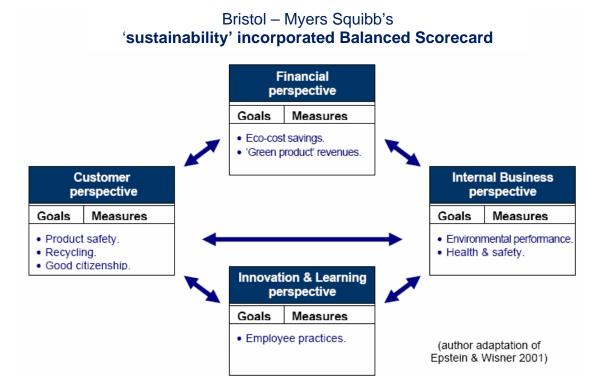
improved product performance and process optimisation e.g. eco-efficiency. With regard to the financing strategy, banks are increasingly evaluating the risks presented through low/poor environmental performance, as laws and regulations become tightened. This can result in increased liabilities and leads to a greater discrimination against those companies with poor environmental performance records, e.g. higher interest rate charges and insurance premiums. There are also aspects such as systemic risks, including energy taxes for example, which all companies may eventually face. This may start within certain sectors initially, but can later broaden the scope and operate regardless of industry, e.g. the EU's Emission Trading System. Value growth duration or extending competitive advantage relates to increasing the longevity of strategies, of which some sustainability strategies are anticipated to become prerequisites for conducting business in the future.

As illustrated below, the effects that add to shareholder value are summarised as an increase in sales growth, an improved operating margin, a reduction in the tax rate and a decreased requirement for working capital and fixed capital investment. They are also influenced by a reduced cost for capital and by initiatives that extend the value growth or competitive advantage period. The only value driver from the Rappaport model that did not effectively relate to sustainability initiatives was the tax rate aspect, though some recent government subsidies and tax breaks/incentives for eco-efficient products or services and the emergence of punitive socio-economic taxes do give this category a new relevance. Within this methodology, the key aim is to aid the decision-making by establishing the causalities and values by mapping the CR theme and stakeholder issues to the business benefit descriptors and linking this to the shareholder driver values.



### 3. Incorporating a Performance Measurement and Management Framework

Measuring performance is a vital management tool towards the control and implementation of initiatives. What is measured appears important and therefore measurement accords importance. Managers need to have goals, measures and targets to incorporate within their functions to assess levels of achievement, reassess priorities and assign resources to strategic goals and objectives. In this respect sustainability performance should be no different. Over the last twenty years, not least from the development of the Balanced Scorecard, non-financial performance (NFP) measures have gained more relevance and importance as leading indicators, with many NFPs being adopted alongside traditional financial metrics to provide a more informed measure of a company's performance. Companies have also adopted sustainability issues directly within this popularised framework <sup>15</sup>, as illustrated below for Bristol-Myers Squibb.



### 3.1 Performance Measure and Measurement Characteristics

The appropriate use and application of measures are vital for the creation, verification and development of Sustainability Performance. Before embarking on the design of such metrics it is useful to understand, from the NFP field, the challenges in designing performance measurement systems for both the measure characteristics and for the system itself. A considerable amount of research has been undertaken in the performance measurement field, and some of the key issues and aspects have been highlighted for consideration by CR practitioners and managers involved in this process.

The summary review of the key performance measure characteristics provided <sup>16</sup>

highlights a key premise that performance measures need to be relevant, simple, quick to measure, visually presentable and easily understood. The measures themselves should be based on an explicit purpose and have an accurate formula that is both comparable and consistent, that can measure trends, encourages improvement and incorporates target setting. The performance measure should be in direct manageable control of the person responsible for that aspect of performance (or in co-operation with others). It is also critical to ascertain agreement on the

#### Performance Measure Characteristics – a review of the literature:

- 1. derived from strategy.
- 2. simple to understand.
- 3. timely & accurate feedback.
- 4. quantities that can be influenced/ controlled by user, alone or in co-operation.
- reflect 'business process (customers and suppliers involved in the definition of the measure).
- 6. relate to specific goals (targets).
- 7. be relevant.
- 8. part of a closed-loop management system.
- 9. clearly defined
- 10. have visual impact
- 11. focus on improvement.
- 12. be consistent (maintain significance with time).
- 13. provide fast feedback.
- 14. explicit purpose.
- 15. based on explicit formula and source of data.
- 16. employ ratios rather than absolute numbers.
- 17. use data sets that are automatically collected whenever possible.
- 18. reported in simple consistent format.
- 19. based on trends rather than snapshots.
- 20. should provide information.
- 21. be precise about what is measured.
- 22. be objective not based on opinion.

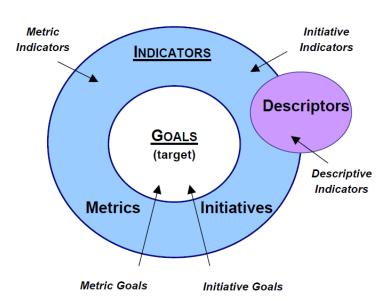
(Neely, Richards, Mills, Platts & Bourne 1997)

meaning and relevance of the measures between the 'suppliers' of the measure and the 'consumers' of the measure and for the measure to be within a closed management loop, so that responses or actions can be fed back. Care is recommended to ensure the performance measure is aimed at the process, at a team or group level, as opposed to the individual level.

## 3.2 Types of Sustainability Indicators and Metrics

A sustainability indicator can be described as a 'specific expression that provides information about an organisation's sustainability performance, and/or makes efforts to influence the performance or the sustainability conditions' <sup>17</sup>. Sustainability performance can be described using metric goals, metric indicators, initiative goals, initiative indicators and descriptive indicators, as illustrated below.

### Sustainability Indicator Relationships



Goals, Indicators, Metrics, Initiatives and Descriptions

Blackburn,W.R. (2007) The Sustainability Handbook

Goals are indicators that are an articulation of a commitment to reach a particular performance or status as either a metric or as an initiative, e.g. " we

will have 80% of \_\_\_\_\_ by \_\_\_\_\_" and "we will achieve the improved coordination of \_\_\_\_\_" (assuming this is measurable) respectively. A *metric indicator* is the familiar quantitative (numerical) metric and the *initiative indicator* would determine the degree of attaining a sustainability-related policy, awareness or training programme, which can be qualitative or quantitative depending on the initiative statement and the evaluative measuring system(s). Both of these indicator types can become the backbone of what are described as Key Performance Indicators (KPIs), and are applicable at the enterprise-wide, business unit or project specific levels. The *descriptive indicator* is a qualitative description of conditions, for example a statement that describes the governance programmes in place, which helps stakeholders assess the company's commitments to a sustainability issue.

As discussed, metric or initiative indicators are the primary KPIs for determining performance and there are a number of applications and uses for them. Sustainability performance measures can be developed for a number of functions, including the assessment of alternative options to determine best value for investments, comparing the performance of different though comparable business operations and for tracking performance trends

#### Use of Sustainability Metrics in decision-making

- technical and business alternative assessments.
- Comparing operation processes.
- Identifying SEEG impacts of industrial & management ops.
- Tracking performance over time.

over time <sup>18</sup>. Although not recommended in some spheres, due to the companyspecific nature of the performance criteria, measurement can also be used to benchmark and compare within the company and (if designed to be so) externally with other CR issue leaders or with industrial sector peers.

Depending on the company-specific aspects identified, sustainability metrics and indicators should be used to monitor the *sustainability inputs* and *sustainability* 

processes of the company, as well as determining sustainability performance in relation to whether the intended strategy is meeting the objectives (*outputs*) and/or the desired long-term success elements (*outcomes*). This is illustrated in the Sustainability Performance Measures Framework below, which can be applied to company, business unit or project specific initiatives. As can be seen, the measures for *inputs*, and the *outputs* or *impact / outcomes* are described in terms of Human, Natural and Economic Capital resources used or replenished, whilst the *process* performance is categorised under Governance, Resource and Economic efficiency or effectiveness measures.

## Sustainability Performance Measures Framework

#### INPUT PROCESS Performance OUTPUT Metrics/Indicators Metrics/Indicators Metrics/Indicators HUMAN & SOCIAL CAPITAL • GOVERNANCE (expertise retained, welfare benefit **E**FFECTIVENESS improvements, reduced sickness/ HUMAN CAPITAL (strategy, decision-making, absenteeism, product safety, (skills, expertise, partnership) administration, engagement, stakeholder contributions, societal, NATURAL CAPITAL process safety) community & individual attractiveness, (raw material resources, water RESOURCE EFFICIENCY awards gained)

- NATURAL CAPITAL (reduced depletion &/or improved/ regenerated material resources)
  - ECONOMIC CAPITAL (return on capital/project investment, risk mitigation savings, product/service innovation returns, market share, sales revenue, comparative stock value, philanthropic and community donations)

#### OUTCOME or IMPACT Descriptors /Indicators

- and own-supply energy/fuel)
- ECONOMIC CAPITAL (monies invested, supplied goods, purchased energy, IT)
- (materials processed, energy used, water used, knowledge & skill development/use) ECONOMIC EFFICIENCY
- (monies allocated, re-work expense, fines/litigation, R&D)

EABIS CR Measurement series Doughty Centre for Corporate Responsibility

## 3.3 Sources of Sustainability Performance Measures

In this section, specific measures that have been identified by practitioners from environmental, social and governance (ESG) sustainability performance metrics are discussed.

With regard to performance measures which are appropriate to a company, the selection criteria should reflect the stakeholder analysis and the company's strategic sustainability performance intentions. These criteria will have been created to suit the competitive environment within which the company operates, and the kind of business that it is. Within the CR Value-Chain Process (CRV Process), the stakeholder profiling and CR sector themes have created this platform, and the business benefit and shareholder-value mapping has helped to develop the understanding and priorities of the CR themes and stakeholders.

A broad range of measurement areas and measures have been developed through external standards and protocols from ngos, government departments, business membership groups, trade associations and multi-stakeholder initiatives. These include the Global Reporting Initiative (GRI), Business in the Community (BiTC), The Natural Step, ISO14000 and the UN Global

#### Example Protocols, Standards and Process Measures & Indicators

- SA8000
- ISO14000
- · Global Reporting Initiative
- BiTC CR Index
- GHG Protocols
- BREEAM
- · Millennium Development Goals
- UN Global Compact
- Combined Code on Corporate
   Governance

Compact. Generally these standards seek to improve the materiality, quality, consistency, accountability and comparability of sustainability performance in either a general or industry-specific sphere. These standards can be useful sources for identifying performance measures that support the CR themes and stakeholder relations, as they themselves are developed in consultation with stakeholders' needs with particular focus on CR themes. For the CRV Process, one starts with the company-centric stakeholder and CR theme priorities and

then seeks to determine appropriate performance measures and performance indicators that are orientated to deliver on value drivers and are specific to the company.

With regard to generic ESG measurement aspects, the World Business Council on Sustainable Development, following a pilot initiative with twenty-two companies from ten sectors, identified a set of generic standardised measures for eco-efficiency around five key areas: energy consumption, materials consumption, water consumption, greenhouse gas emissions and ozone depleting emissions <sup>19</sup>. Other practitioner research activities have complemented this view of environmental sustainability indicators by highlighting the effectiveness of using production-based process output ratios as a standardised method of presenting sustainability "intensity" performance, as illustrated <sup>20</sup>.

#### Generic Eco-Efficiency Issues & Measures

- · Energy consumption.
- Materials consumption.
- Water consumption.
- Greenhouse Gas emissions.
- · Ozone depleting emissions.

#### Key Sustainability "Intensity" Indicators

- Energy Intensity K.Joule equivalent per unit of output.
- Materials Intensity Kg of materials wasted (not converted into output) per unit of output.
- Water Intensity Litres of clean water per unit of output.
- Greenhouse Gas emissions Kg of CO<sub>2</sub> equivalent of process per unit of output
- Pollutant emissions Kg of pollutants (or standard equivalent) by the process per unit of output.

## 3.4 Examples of Sustainability Performance Measures

In this section, examples of specific performance measures are provided that may be useful when exploring suitable KPIs for different stakeholders and their linkage to business benefits.

The *environmental measures* are appropriate for a range of eco-efficiency attributes, with examples that cover the input, process and output aspects of the company's possible impacts.

The *social measures* provided illustrate the social impacts from employment, the impact of the company's product and service, employee welfare and diversity, and aspects of employee engagement within society-orientated initiatives.

The *economic measures* illustrate the movement of finance in relation to measuring cost, returns and payments that relate to stakeholders such as suppliers, government and shareholders.

The *governance measures* reflect mechanisms that indicate the level of sound corporate governance activities within the company, which is of interest to institutional investors, employees and directors.

#### **Environmental Measures**

- No. of products with lifecycle assessments
- % of recycled materials used as inputs
- Volume of air and water emissions
- No. of hazardous materials used in processes
- Volume of landfill use
- % of companies covered by EMAS/ISO14000

#### Social Measures

- % of suppliers covered by ethical procurement
- No. of local jobs created
- No. of product recalls
- % of employees with disabilities
- % of businesses with collective bargaining
- No. of employee volunteer hours

#### Economic Measures

- · Cost savings from reductions in energy costs
- Costs of fines/penalties
- Average payment times for suppliers
- Monies paid in government tax contributions
- Income generated from retailing recycled
- waste products
- Costs of waste disposal

#### **Governance Measures**

- % of independent directors on the Board
- Existence of Code of Conduct for Directors
- No. of Ethical/Legal violations
- % of major projects meeting operational goals
- % of compensation linked to Performance
- No. of policies and codes of conduct in the company

The *stakeholder relations measures* are an important consideration for the CRV Process as they measure or describe the strength of stakeholder relations. For the company, more specific measures should

#### Stakeholder Relations Measures

- Employee satisfaction rates
- No. of community complaints
- Customer satisfaction survey scores
- No. of awards received
- Rates of +ve/-ve media coverage
- No./type of challenges from government

be developed that are orientated towards each of the prioritised stakeholder relations.

## 4. Determining the Business Value

Having created a range of performance measures and targets that evaluate the sustainability performance against the CR issue and stakeholder need, the final stage is to determine the type of business benefits and level of shareholder value gained from the various programmes and initiatives.

It is useful to determine the approaches taken within the company with regard to other non-core investments areas e.g. Health & Safety, Environmental Management, Personnel Development and the levels of investments applied before determining the level of sophistication that should be expected for different investments in sustainability performance programmes.

Quantifying the business benefits in monetary terms is still one of the key performance measurement challenges for triple bottom line reporting. Like that of traditional financial accounting, 'sustainability accounting' requires coordination, management and accurate administration towards measurement and towards the systems and processes required for data capture, evaluation and reporting. The challenge is compounded by the fact that no accepted 'sustainability accounting' process exists <sup>vi</sup>. This is due, in many respects, to the various perceptions of value and the subsequent difficulty in agreeing the scope and specific costs of externalities. It is also coupled with a lack of published research into the development and measurement of cost accounting and the challenge of attributing direct cause and effect from the internal operationalisation of sustainability. There is a distinct opportunity for practitioners to develop their company's capabilities within this under-developed area. The analytical examples that follow are provided to describe the different approaches that can be orientated towards sustainability issues. It is recommended that the topics are reviewed in more detail with relevant specialists and experts within the organisation with regard to organisational approaches and applicable corporate standards of practice.

There are some general principles that can be applied to sustainability-related initiatives to explore and clarify the measurement of financial value:

- the cost of implementing over a time period
- the gains made over that, or an extended, time period
- the direct costs saved
- the risks mitigated
- the costs avoided

Some examples and suggestions in relation to this challenge are highlighted and explored in the final section of this paper.

<sup>&</sup>lt;sup>vi</sup> Examples that do exist include the Prince of Wales Accounting for Sustainability (www.accountingforsustainability.org) and PWC's Corporate Reporting (www.corporatereporting.com).

## 4.1 Environmental Cost Accounting

For environmental measures relating to waste reduction and eco-efficiency, traditional financial measurement systems and investment appraisals can be applied under the auspices of environmental cost accounting. A leader in this area is Baxter International Inc. which, over the last 15 years, has developed sophisticated methods of measuring the business benefits of environmental initiatives in terms of



costs, income, savings and avoidance, as described in their 2006 Environmental Financial Statement <sup>21</sup>, schematically illustrated here. This full cost accounting includes costs of running the basic programmes, the costs of the environmental fixed capital involved and the ongoing costs of remediation and waste management fees. This is then balanced by offsetting the costs with the income gained from recycling and diverting waste stream materials, costs avoided from reduced material flows and disposal, and direct benefits from energy and water conservation.

## 4.2 Management Accounting Approaches

Tools developed for traditional capital investments, such as simple payback and net present value (NPV), can be used for projects and initiatives that have CR investments. These can be used for eco-efficiency measures such as new lighting, insulation, energy reduction, pollution reduction or water conservation initiatives which have costs within applicable stand-alone evaluations.

As can be seen from the example provided below, estimates for the capital required in terms of capital equipment and operating expenditure, e.g. training,

can be modelled over a period with the expected time periods for annual savings – in this case the amount of heat or light, energy or water, at the applied cost of the energy or water and/or perhaps the saved fees (discharge water rates or CO<sub>2</sub> emission levies). This is then discounted against the investments.

#### **Eco-Efficiency Investments**

Equipment Capital	(energy/ lighting/ water conservation - 2 stage investment)
Training Capital	(initial new equipment training + new staff/expanded training - continuous)
Eco-Savings	(measured savings at charge/(emission/ discharge) fee/ rate)
Discount Factor	value of money later compared with now (discount for inflation & risk)

Simple Payback			Payback:	3 years 10 m	onths	Year 6 Total	460,000
	year 0	year 1	year 2	year 3	year 4	year 5	year 6
Equipment Investment	-400,000	0	-150,000	0	0	0	0
Training Investment	-100,000	-25,000	-25,000	-25,000	-25,000	-25,000	-25,000
Maintenance Investmen	t	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000
Savings (eco-reductions)		150,000	200,000	250,000	250,000	250,000	250,000
Running Total	-500,000	-390,000	-380,000	-170,000	40,000	250,000	460,000

Net Present Value			NPV Payback:	5 years 5 mo	onths	Year 6 Total	66,550
	year 0	year 1	year 2	year 3	year 4	year 5	year 6
Equipment Investment	-400,000	0	-150,000	0	0	0	0
Training Investment	-100,000	-25,000	-25,000	-25,000	-25,000	-25,000	-25,000
Maintenance Investmen	ıt	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000
Savings (eco-reductions)		150,000	200,000	250,000	250,000	250,000	250,000
Discount Factor (10%)	1.00	0.91	0.83	0.75	0.68	0.62	0.57
Net Present Savings		136,350	165,200	187,750	170,750	155,250	141,250
					-		
Running Total	-500,000	-403,650	-428,450	-280,700	149,950	-34,700	66,550

Assuming there is a break-even point, this will then go to reduce the operating cost, which according to our business benefit model leads to improved shareholder value.

As illustrated, the simple payback is an easier evaluation to apply. Though less sophisticated than the NPV method <sup>22</sup>, it is still effective in demonstrating economic returns in simple terms. It should be noted that the project investment is being evaluated as a stand-alone initiative, whereas, in reality, it would or should be compared with other opportunity costs, i.e. other investment

opportunities, or at the very least compared with other eco-initiatives or CRorientated investment profiles. The NPV approach (applied to the same initiative in the example above) is a more effective method for both the stand-alone evaluation and for comparing competing initiatives, as it accounts for risk and inflation adjustments and standardises the comparison of projects against their varying future cash flows. It is recommended that discussions are entered into with financial investment analysis staff to determine the company's approach to using the discount factor (also termed the WACC, or weighted average cost of capital). For example, the discount factor applied can be lower for projects with

established lower risks of not providing returns, as compared with other initiatives, for example eco-efficiency projects using known, proven technology and CR initiatives that seek to deal with a real, forthcoming legislative requirement. From the example of discount factor variance

Financial Discount Rates WACC values (weighted average cost of capital)				
risk/returns				
15 %				
10 %				
5 %				

illustrated below, and from the previous NPV calculation example, the chosen discount factor can have a significant effect on the financial investment appraisal and approval of an initiative. As such, it is particularly useful to understand this criterion when discussing the business case for different types of sustainability initiatives. However, as other firms apply environmental standards, such activities may become 'business as usual' and these in effect become mandatory.

Even if the project does not provide a positive return (payback), it may still be value-enhancing for the company through risk reduction or mitigating investment that avoids or postpones the chance of being fined, and being more heavily regulated or litigated against in the future. Again, this effect should be developed within a financial model calculation (possibly a second extended version that includes such scenarios) to show the time period of contribution to shareholder value. With regard to considering the level of sophistication for evaluating projects using NPV, it is worth mentioning that NPV decision-making analysis can

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be enhanced by introducing 'real options'. Real options allow for the inclusion of considerations towards the implementation of an action <sup>23</sup>, such as buying/leasing (large capital expenditure vs. a steady operational expenditure) and for expanding (smaller piloting followed by larger roll-out) or deferring an investment (delaying the investment and the returns for 1 to 2 years), at a predetermined price, over predetermined time periods. This allows for the flexibility, uncertainty and learning features inherent in management's project planning and business strategy developments.

The simple eco-efficiency example above highlights the usefulness of developing project-related investment models as methods of demonstrating the business benefits, operating cost or risk mitigation aspect for improving shareholder value. To complement the decision-making process, as well as for sound management practice, it is important to monitor, manage and establish the actual costs and savings – as was the case for Baxter International Inc.'s environmental financial statement example described earlier.

Another point worth highlighting is that even when evaluating an eco-initiative on its own, there are potentially other benefits that may not be realised immediately from the simple payback, NPV or risk assessment modelling. For example, Verifone retrofitted a warehouse with a 65-75% energy saving with 7.5 years payback in their calculations. Additionally, however, they also realised a 45% reduction in absenteeism as an unexpected bonus <sup>24</sup>. This effectively created an increase in productivity from the same operating expenditure budget, which in turn generated increased sales volumes and/or revenue as a business benefit that will be reflected as improved shareholder value. It is therefore worth measuring other elements in the business, such as absenteeism and seek to identify where other initiatives may have a positive, causal and measurable effect on other value drivers in the company.

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## 4.3 CR Opportunity and Risk – Analytical Frameworks

Another related approach is to adapt and adopt cost benefit analysis practices from the risk management field. At present there is a lack of effort applied towards translating qualitative social, political and environmental risks into quantitative formats that can be used for investment decision making <sup>25</sup>. As with the previous section, the analytical frameworks described here cannot go into sufficient detail to cover every aspect, and should be viewed in terms of developing an understanding of the approach and then be followed up, in relation to the risk management practices of the company.

There is an inherent duality between opportunity and risk. From the company-

centred CR-perspective, the sustainability performance and shareholder value relationship can be optimised by reducing the effects from real risks and maximising the benefits from real opportunities.

"In our markets lie the greatest social and environmental risks and also the greatest opportunities for new solutions, services and ways to grow our business" Mervyn Davies CBE (2007) Chairman Standard Chartered PLC

With regard to the view of risks, there are four decisions that can be taken in relation to an identified risk, as follows:

- risk avoidance (removing the risk entirely)
- risk mitigation (reducing the risk by a proportion)
- risk transfer (moving a proportion to a 3<sup>rd</sup> Party including insurance / hedging).
- Combination of the above.

The choices and options depend on the type of risk and whether there are mechanisms to apply each of the options. There will be different costs and benefits associated with each of the approaches, which in turn will affect the financial value estimates from initiatives. From a stakeholder perspective and business driver perspective, the approach is described on an issue-by-issue basis as follows (refer to the risk-orientated table earlier in 2.2.1 Business Benefits regarding other risk-orientated aspects):

	Financial Evaluation of CR-related Risks
1.	Identify the Risks (e.g. losing staff to better payers)
2.	<b>Assess the Benefits</b> of the risk issue (e.g. paying only minimum industry standard wages to staff)
3.	<b>Assess the Costs</b> (e.g. loss of staff (knowledge and labour productivity), increased recruitment costs (advertising, assessment, training), managerial backfill and loss of actual managerial time)
4.	Identify the Likelihood of that happening (e.g. 10%)
5.	Calculate the Expected Value of the costs (costs x likelihood)
6.	<b>Determine the Cost &amp; Benefit timescales</b> and convert into NPV values
7.	Calculate the Return on Investment (ROI %) [(total benefits – total costs)*100 / Capital Costs (investment)].

As well as viewing this on a CR or stakeholder issue-by-issue basis, it can also be applied to broader strategic investment decisions, within which CR and stakeholder-related concerns are interrelated.

As highlighted earlier, in section 4.2 Management Accounting Approaches, it is recommended that discussions with professional staff, in this case risk management personnel, are undertaken to determine an approach that is appropriate to the company's existing processes.

For example, in some cases, risk management approaches incorporate likelihood probabilities and financial risk values that are grouped or banded into fixed mid-point values for a more simplified pragmatic application, as illustrated in the example.

Likelihood		Costs/V	alues
very High	70%	very High	20m
High	40%	High	5m
Moderate	20%	Moderate	1m
Low	10%	Low	¹⁄₄m
very Low	1%	very Low	100k

With regard to project or initiative based assessments, this approach can be applied to scenarios such as, for example, decisions relating to the (re)location of a factory or the choice of a new supplier within a developing country <sup>22</sup>. As illustrated in the table below, the costs and benefits are assessed in the traditional accounting manner, and the political, social, environmental and economic risks are identified. This can be incorporated within the decision making process.

RISK EVALUATION	Sourcing Supply-chain / Locating Factory in Developing Country
Benefits:	New products/cheaper products, Revenue stream, Market share, Labour cost savings, Land purchase/rent/rate savings, Lower regulatory costs, Tax savings
Costs:	Transport, Import duty, Raw materials, Operating & labour costs
Political Risks:	Embargos/restrictions, Government corruption, Criminal activity, Terrorism
Social Risks:	Civil unrest (security), Child labour, Forced labour, HIV/health, Local labour skills, Consumer backlash, Trade Union backlash
Environmental Risks:	Lower regulations (pollution), Intermittent natural resource supply (materials, energy, water)
Economic Risks:	Quality control (dangerous/substandard products), Brand reputation

The risk management approach is applied so as to determine the extent to which the risks can be managed, with the relevant costs and benefits of applying the adopted risk management approaches. The stakeholder salience model and CR typology approach (described in section 2.1 of this paper) are useful tools and methods for identifying and prioritising the risk-related issues. Relevant performance measurement characteristics should also be developed to underpin the management and evaluation of the performance of the initiative alongside the financial measures (described in 3.4 Examples of Sustainability Performance Measures).

As illustrated below, for the opportunity to develop a new 'green product/process', the measurement of business value should not only be assessed in the traditional financial attributes of cost and benefits, but also proactively seek to incorporate other opportunity-orientated factors that CR can provide.

OPPORTUNITY EVALUATION	Developing an Eco-Efficient Product/Process Range
Benefits:	New product, added Revenue stream, New market/consumer share, Extended competitive advantage, New business model, Lower running costs (toxicity /material handling/disposal/energy)
Costs:	Research & Development, Skill training, Re-tooling, Change materials/storage, System changes, Decreased/lost 'old model' revenue, Raw materials, Operating & Labour costs
Political Opportunity:	Government and Regulatory, production, import, export & marketing support
Social Opportunity:	Societal recognition for bringing a solution to the marketplace (brand), Improved employee retention (good company), Improved customer loyalty/retention, New learning and knowledge
Environmental Opportunity:	Lower toxicity material handling, storage & use, Increased material re-use & recycling, Reduced material discharge
Economic Opportunity:	New market penetration, First mover advantage (reputation), Capture early adopter markets, Knowledge & learning capacity building, Improved supplier collaboration and partnerships, New service flow business model transformation

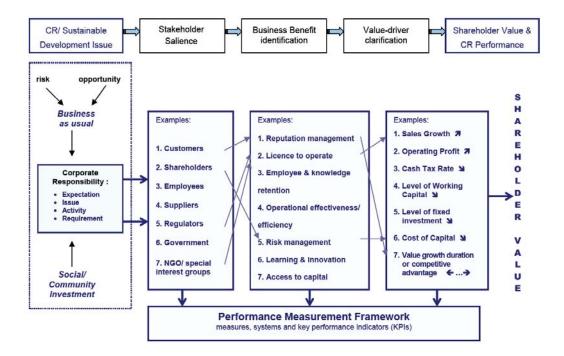
As discussed, sustainability opportunity aspects are the other side of the same CR issues coin. In this respect, opportunities can be treated in much the same manner as has been described for CR risk issues. As the assessment approach is being applied to the prospecting of sustainability-related opportunities, the key difference is that the focus is more on seeking to exploit and explore an opportunity that has been identified rather than perceiving CR and Sustainability elements as either only a cost or a risk to be reduced<sup>26</sup>.

## **Conclusions and Recommendations**

A more systematic and strategic approach has been proposed for linking CR/sustainability themes and stakeholder relationship management with business benefits. By coupling this process with performance measurement characteristics, risk assessment and financial evaluation techniques, this business value approach provides improved rigour and focus on the managerial link for CR-related activities with shareholder value drivers and sustained competitive advantage. As the integration of CR principles within the company remains a challenge, the methodology, concepts and tools in this paper provide a practical and pragmatic framework that contributes to achieving this goal.

The CR Value-chain process described in this paper and summarised below, describes a robust analysis and development method for deriving the business cases for sustainability-orientated aspects of the company and consolidates a number of key process considerations with regard to the identification, assessment, analysis, performance measurement and financial value linkage for CR activities.

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The methodology and tools are recommended for use by managers and CR practitioners to evaluate and communicate the business value and worth of sustainability components within and throughout the business. They also provide a framework to aid dialogue with strategic, risk-management and financial professionals with regard to approaches for internalising sustainability within the company's existing management systems.

There are useful checklists of features that can be adapted and selectively used to fit within any company and project context, allowing customisation to fit with existing management systems. The approach, however, is by no means fully comprehensive, considering the emerging and contemporary nature of the subject. The main contribution and value will come from piloting, developing and adapting the approach to fit the organisations' individual culture, structure, systems and process. Caution is therefore recommended, i.e. not to over-exert the level of scrutiny required where it may be difficult to do so. The approach taken should be balanced with the company's management, decision-making approach and monetised financial return scrutiny conditions that are applied to

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other non-core business aspects which have now become fundamental hygiene factors for doing business in a regulatory or competitive environment, e.g. health and safety programmes, risk management functions, ISO14000 implementation programmes, personnel training and development programmes. Before adapting the method and sophistication level specifically for the company, it is recommended that these non-core business elements are reviewed to ascertain the business case evaluation, performance management and monetisation of benefits expected and applied to them.

The operationalisation of corporate sustainability performance within the company is part of a progressive journey that requires adjustments to existing governance and management systems. The tools, methods and approaches highlighted in this paper serve as useful references towards achieving this in practice.

A summarised **10 Step CR Value-chain Process** is provided below as an additional reference. It complements the paper by briefly highlighting key stages for applying the methodology as well as identifying the actions required to determine the quality of achievements and evaluations from the process.

#### 10 steps to creating a CR Value-chain process

- Collate all the information available on key strategic and operational issues that may affect your business now and in the near future. Useful to classify, categorise and create preliminary levels/indicative scales regarding the relative importance of the CR-related issues.
- Identify all stakeholders associated with the CR-related issues and rank them according to strategic importance to the business. Use matrix tools such as Power & Interest; Power, Legitimacy & Urgency; or Influence, Activeness, Contribution. Couple this with the categorisation of CR issue/effect and level/type of stake (enterprise-wide, business unit specific, project specific).
- Identify what the prioritised stakeholders want and need from the business in terms of activities and outcomes and what the company wants and needs in return.
- 4. Identify how these stakeholders and the issue affect/contribute to the business benefits.
- 5. Map the cause and effect of stakeholders from the business benefits onto the shareholder value model.
- Develop specific measures and indicators that can describe the inputs, processes, outputs and outcomes, as well as indicators and measures for determining the strength of the stakeholder relationship.
- Use these performance indicators to inform strategic and operational decision-making regarding the allocation of resources to implement the appropriate level of satisfactory outcome.
- 8. Use traditional financial assessments, operational project models and risk models to profile and monitor expected and actual financial benefits, savings gains and cost avoidances.
- Periodically evaluate the use and effectiveness of these indicators, both in internal practical functionality and for matching with deriving the expected outcomes of the effect on the stakeholder and the desired CR output or outcome.
- 10. Use the measures and monitoring systems to determine how effective such actions and levels of performance have been in terms of the effect on business benefits and shareholder value.

## Appendix: CR Keyword Typology

## Corporate Responsibility - Keyword and Thematic Descriptor Typology

Overview CR Theme	Theme descriptive
ECONOMIC	
Money / cash flow movement	sales, profits, taxes, subsidies, dividends, shares allocated, fines paid, goods purchased
Business investments	productivity investments, capacity investments, risk reduction investments, training investments, research & development investment, supply-chain investments, community investments
Employee contributions	wages, benefits, profit-sharing, bonuses, pensions, social security, health benefits, employment profiles, profession types / levels
Financial Ratios	financial ratios, return on net assets RONA, liquidity, return on capital employed ROCE, internal rate of return IRR, net present value NPV, payback, investment appraisals
Productivity Indicators	number of patents, number of partnerships, timely payment of suppliers
Economic impact assessments	outsourcing, restructuring, GDP contributions, supplier location, selection, numbers, sizes, attraction of additional inward investment, multiplier effects
Corporate ethics	corporate governance, minority shareholder rights, anti-trust, anti-bribery/corruption, fair trade, animal welfare, anti-competitive, political lobbying & association, operational & business risk disclosure, shareholder profiles, Board/CEO remuneration
ENVIRONMENTAL	
Environmental impact assessments	product lifecycle efficiency, product impact assessment, project impact assessment, environmental impact assessment, product lifecycle impact, ecological footprint, new build
Resource use and conservation	energy, water & material use, management & conservation, renewable energy, alternative technology, material utilisation, waste management & conservation, re-use, recycling, packaging, fines, offences, awards, certification, supply-chain performance
Emissions and pollution conservation	effluent and water quality release and reduction, greenhouse gases, ozone-depleting gases, air quality, emissions and reduction, noise pollution, transport and distribution
Sustainable product development	recyclability design, eco-design, product substitution, endorsement, supply-chain certification, material substitution, process change, consumer product disposal, consumer product (eco)-labelling, producer responsibility
SOCIAL	
Core labour standards	diversity, equal opportunities, gender balance, human rights, collective bargaining, forced labour, child labour, freedom of association, redundancy support
Working conditions	employee satisfaction, health & safety, training, working conditions
Community engagement	employee volunteer programmes, health programmes, HIV/AIDS, water and sanitation projects, energy projects, enterprise programmes, agriculture programmes, food aid programmes, school/education programmes
Stakeholder engagement	ngo memberships, stakeholder representation in decision-making, stakeholder consultations
Corporate philanthropy	voluntary programmes, charitable donations, foundation incorporation

D.L.Ferguson 2006

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