Sustainable organisation performance: Towards a practical measurement system

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This paper considers the history of how organisations have measured performance over time. It considers how proposals such as the triple bottom line and sustainability reporting are likely to influence organisational performance measurement in the future. Using a stakeholder theory approach, and the balanced scorecard technique which is currently used in many organisations, the paper proposes a sustainable balanced scorecard to measure future measurement needs, while maintaining a practical measurement system.

Introduction

Imagine having to choose which organisation you think is doing well from the following scenarios:

> Scenario 1: your organisation is achieving a very high shareholder return, but employees are badly treated and the organisation is not popular in the community, as it is perceived to sail close to the wind on all legal and environmental issues.
>
> Scenario 2: your organisation wins the 'best employer to work for' award, but is losing money and has no positive profile in the general community, as the organisation is seen to be run for the benefit of employees.
>
> Scenario 3: your organisation wins community and environmental best practice awards, but does so because it takes advantage of the goodwill of its employees and is losing money.

Difficult? Depending on your personal value system or your position in the organisation (eg CEO, frontline employee, legal officer etc), you may well be able to make a choice, but it seems more likely that what we would really like is to have an organisation doing well in all areas, not just one. The above scenarios demonstrate a tradeoff between competing groups of stakeholderss, but it may be possible to develop a win/win scenario which is more attractive than any of the above scenarios.

Measurement of organisational performance is required to assess organisation strategy. The field of strategy is dominated by case studies of 'good' organisations such as GE, Walmart, BP, Toyota or Haier – and the implied value in copying their practices to attempt to outperform competitors. An organisation which is performing well generally does not change its corporate or business strategy. On the other hand, an organisation which is not performing well may well consider such a change.

In this paper, we will first demonstrate how organisation performance measurement systems have changed over time and how the current set of pressures to measure environmental, social and sustainability performance are likely to see them change in the future. We will consider how those complex future changes might be incorporated into a practical sustainable balanced scorecard method and propose the desirability and feasibility of developing a single indicator outcome to do this.

Theory of the organisation determines performance measurement approach

How we make that assessment of performance depends on our implicit, underlying view of the theory of the organisation. Believers in shareholder value theory (eg Porter 1980) focus on shareholder return in determining how well the organisation is doing. Believers in stakeholder theory (Freeman 1984, Reich 1998; Post et al 2002), assess performance against the expectations that a variety of stakeholder groups in the organisation have for it. Stakeholder theory has a wider perspective than shareholder theory. Shareholders represent one group of stakeholders (in organisations which have shareholders), but employees, customers and suppliers are other groups whose well being is affected by how the organisation performs, regardless of the type of organisation (i.e private, public, not-for-profit, government etc). Notably none of the three scenarios above would satisfy all stakeholders for those hypothetical organisations, yet, for an organisation to be assessed as doing well under a stakeholder theory view would require that some balance existed between the outcomes for the various stakeholder groups involved in the organisation.

Because stakeholder theory is wider than shareholder theory and can include it within a stakeholder perspective, a stakeholder view seems more appropriate for the theoretical basis for performance measurement of organisations in general.

Recent developments of organisational performance measuring systems

From Shareholder Value to the Balanced Scorecard

During the 1980s, shareholder theory, with its focus on measures of shareholder return, dominated organisational performance measurement systems. However, over the last 10 years, and consistent with stakeholder theory, Kaplan and Norton's (1992) development of the balanced scorecard (BSC) – which balances financial, customer/market, short term efficiency and long term learning and development perspectives – is gradually becoming the dominant internal process of measuring performance for most large organisations.

The BSC does not suggest that shareholders are unimportant. However, consistent with stakeholder theory, they are seen as only one important group whose needs must be met, not the only, or even major, group.

Kaplan and Norton suggested that the number of measures used to measure strategic performance should be limited and suggested that each of the four quadrants should have 4-6 measures only, making a total of 16-24 measures in total. They argued that these measures should be linked in a cause-and-effect way, thus making the set of measures integrated (Figge et al 2002). However, most organisations using the BSC have not developed causal links between the factors nor do they have any clear way of 'adding' the increasingly wide range of measures being used. Figure 1 provides an indicative BSC consistent with the original conception, but without attempting to demonstrate any causal links between the measures.

Figure 1 (BSC) here

However, although the BSC is gradually becoming a common measurement system, it is primarily limited to economic measures of value and to the internal creation of economic value by the firm. (Mooraj et al, 1999) noted that employee, supplier and community concerns are not part of the original BSC model.

The Triple Bottom Line

At the same time that the BSC was developed, a groundswell of concern for the impact of organisations on a wide variety of aspects of the natural environment and also on the communities began to develop. Reflecting these wider forces, in 1997, the triple bottom line (TBL) concept (Elkington 1997) was proposed as a tool for measuring organisational performance. Consistent with stakeholder theory, the TBL adds social and environment measures to the economic measures which

are the ones currently mostly focussed on in an organisation, even under the BSC. The TBL takes a much wider perspective of who the stakeholders in the organisation are. The theory behind the TBL is that an organisation should take account of its performance in relation to that wider group of stakeholders (such as communities and governments) who are affected by the organisation's activities, rather than just the narrower group of stakeholders (such as employees, suppliers and customers) who are directly impacted through transactional relationships.

The TBL concept has been unsettling for most organisations as it implies that the organisation's responsibilities are much wider than simply those related to the economic aspects of producing products and services which customers want, at a profit, while maintaining satisfied employees. The TBL (see Figure 2) requires an organisation to measure its 'social performance' – generally taken to mean in relation to the communities in which it and its suppliers work – and its 'environmental performance' – generally taken to mean its impact on use of resources (eg optimal and efficient use of materials in its operations) and by-products emitted from its processes (eg waste, air emissions, chemical residues etc).

Figure 2 (TBL) here

Whereas shareholder value, market share, customer satisfaction and employee satisfaction are relatively easily measurable and are quite common measures across organisations, the questions of what to measure for the 'social' or the 'environment' performance of the organisation are almost certainly unique to each organisation, or at least each industry, and they are likely to be hard to measure, given the wide breadth of scope.

Measuring Environmental Performance

Consistent with the TBL philosophy, as external pressure to understand the impact of an organisation on the environment developed, through increasing government regulations, non-government organisation (NGO) lobby group pressures and focus and community concerns (eg riots and protests at every global World Trade Organisation meeting promoting the development of freer international trade, since Seattle in 1999), organisations have been forced to respond. One response has been the development of certified Environmental Management Systems (EMS) which are designed to develop organisational environmental policies, set objectives and targets for reducing environmental impacts and develop structures and processes for implementing systems to train, communicate and document those policies.

The leading EMS system is ISO14001 (first introduced in 1996 and amended in 2001) and its associated performance measurement system ISO14031 (first introduced in 1999). In 2005 it was reported that over 36,000 certificates had been awarded in 112 countries, including 14,000 in the last year, indicating its widespread and now rapid growth (Gonzalez-Benito and Gonzalez-Benito 2005)

However, as ISO 14001 only certifies that a process, a system, exists, it does not say anything about the actual performance level of the system (Bansal 2002). Nor are there benchmarks for acceptable levels of performance (Litten 2005), auditing of performance is voluntary ((Rowland-Jones et al 2005), the quality of audit is patchy and variable and, since auditors report to management and do not involve stakeholder groups in the main, audit independence is limited (O'Dwyer and Owen 2005). Further, the level of acceptable performance varies country by country (Dowell et al 2000) so that 'certification' at this time has limited real meaning. What it does suggest is that there is an attitude, an intention to develop processes to manage environmental issues by many organisations (Hollender 2004).

Another system, the Environmental Measurement and Auditing System (EMAS), appears to be a superior EMS to ISO14001, as it requires an assessment of actual environmental performance outcomes, rather than merely certifying the existence of a system, and it also requires external auditing. However, it has had limited takeup, perhaps due to these more stringent requirements (Rowland-Jones et al 2005).

Despite the limitations of these early model frameworks, the rapid growth and wide spread of ISO 14001 suggests that there is a groundswell under way. (Preston 2001) noted that Hewlett-Packard had found that 80% of organisations it studied mentioned the existence of ISO14001 certification in an organisation as a criteria for purchasing decisions. Gonzalez-Benito and Gonzalez-Benito (2005) found that ethical and commercial reasons were drivers of organisations seeking certification while,

post-certification, the drivers were ethical and the development and maintenance of relationships. Tyleca et al (2002) found that there was pressure for standardisation of measurement systems due to the formalisation of environmental management practices, a 'right to know' advocacy from community groups and management accounting practices.

The development of EMS within organisations is evolutionary (see Figure 3). An initial driver is the need for legal compliance, followed by a focus on pollution control. Over time this emphasis moves from pollution control (of emissions and waste) to pollution prevention and eco-efficiency while leading edge organisations move to ecological design (via design innovation) with an eventual move to emphasise sustainability (Dias-Sardinha and Reijnders 2005), accompanied by a change in emphasis from process to outcomes (Kolk and Mauser 2002).

Figure 3 here

Measuring Social Performance

While there has been a great deal of focus on the 'environment' part of the TBL, there has been a lesser focus on the 'social' aspect. Although the field of corporate social responsibility (CSR) has developed and seems consistent with social measurement, this term has been used to mean many different things. CSR can mean all aspects of activity outside the organisation (including environmental), a narrow focus on corporate philanthropy, corporate philanthropy extended to match activities to the strategies of the organisation, or the specific area of 'social' areas to which the organisation has, or might feel, some responsibility (Reich 1998; Hollender 2004; Hess et al 2002; Bansal 2005). Thus CSR can be extremely narrow or extremely wide in scope.

As with environmental performance, the pressure for measuring social performance has been triggered first by increasing legal responsibilities, but then by moral responsibilities. Organisations have always had 'social' responsibilities for their employees, yet recent external focus on the growing practices of outsourcing and the use of cheap, underage, overworked labour in developing countries has forced many international companies to move beyond the merely legal responsibilities, beyond national boundaries and beyond the boundaries of their own organisation to encompass and take responsibility for supplier practices as well. Hollender (2004) argues that corporate leadership is the biggest obstacle to the development and that the development of trust and strong and clear corporate values are the key drivers for the social performance of an organisation.

Interestingly, no specific 'social' measurement systems have developed to parallel 'environment' measuring systems. However, the focus of *Fortune* and other influential business journals which publish lists of ratings of the 'Best Company to Work For' and the development of external rating systems which assess the social performance of major corporations is occurring rapidly, driving increasing internal concern with actual social performance. The World Economic Forum has found growing acceptance of corporate social responsibility at top business level, suggesting that, once this area finds an agreed framework, it will develop along the lines of EMS.

Sustainability and organisational performance measurement

Although the TBL includes social and environmental measures, the emergence of the even wider concepts of 'sustainable development' and 'sustainability' as global and national issues to which organisations are seen to be major influencers, has broadened even further the issue of how to measure organisational performance. Perceptions of unsustainable mining, developing, agriculture, housing and consumption practices are leading many in the world to see the need for massive change in individual and organisation behaviour.

The Brundtland Report (WCED, 1987) resulted in a seminal change in global thinking. It developed the term 'sustainable development' and defined it as:

> Development that seeks to meet the needs and aspirations of the present without compromising the ability of future generations to meet their own needs.

The concept of sustainable development received further impetus from the United Nations conference on Environment and Development in Rio de Janiero in 1992 (the 'Earth Summit'), when countries of

the world agreed to work together to address the widely recognised environmental problems which the earth was experiencing. National governments were expected to respond locally. For instance, the Australian Government responded with a National Strategy for Ecologically Sustainable Development that year in which it proposed to (Goldie et al, 2005):

- enhance individual and community well being and welfare by…economic development that safeguards the welfare of future generations
- provide equity within and between nations
- protect biological diversity and maintain ecological processes and life support.[1]

At the organisational level, Hockerts (1999) defined 'sustainability' as:

> Any state of a business in which it meets the needs of its stakeholders without compromising its ability also to meet their needs in the future. A company has to ensure that its operations are sustainable in regard to its economic, social and environmental performance.

This stakeholder-based definition suggests that the TBL is an appropriate approach to measure organisational sustainability performance. However, the definition clearly extends the set of factors that would need to be measured, since it is concerned not only with current performance but also with the impacts of current performance on stakeholders' needs in the future.

The impact of sustainability on organisation strategy

Introducing the concept of sustainability into an organisation's thinking has implications for how it considers its strategy which, in turn, affects how it measures its performance. Organisations' reactions to the issue of sustainability have mirrored their reactions to the introduction of how to address environmental issues. Indeed, many organisations do not distinguish between 'environment' and 'sustainability'. This may explain the heavy recent focus on the development of EMS without accompanying social management systems or CSR systems, which are likely to be forerunners to any sustainability performance assessment system.

Organisations have focussed on what is needed to be legally compliant, reacting to what is required or sought, with only a brave few organisations seeing sustainability as a proactive strategic development to be embraced for possible competitive advantage. Strategically, for many organisations, 'sustainability' has come to mean 'consistent levels of economic growth' for the organisation, or economic sustainability (Bansal 2002), rather than the holistic view of 'sustainability'. The Rocky Mountains Institute estimates that production efficiency needs to increase by 10 times (i.e. 1000%!) to achieve sustainability (Bansal 2002). This would seem to imply that it is unlikely that economic 'growth' will occur for most organisations, if general environmental and social sustainability is to be achieved. Indeed, it implies that future organisation practices will need to be orders of magnitude different from those of today. Similarly Ehrenfeld (2005) argues that the corporate 'sustainability' reports that organisations are now beginning to produce do not in any way come close to representing the requirements of true sustainability for a society.

Sustainability therefore is likely to have huge impacts on organisation strategy. Strategically, organisations can see sustainability as a pressure to comply with, a cost to be incurred or an opportunity for competitive advantage Evidence from leading organisations is that their attitudes evolve from the first of these to potentially seeing sustainability as a competitive advantage, as the more optimistic writers propose (Hart 1995, Florida 1996). For instance Hewlett-Packard has evolved from a concern with pollution control and prevention to product stewardship (being responsible for all stages of the product from suppliers to final disposal/recycling) to development of innovative new technologies to achieve sustainability (Preston 2001). Similarly Dell defines 'sustainability' in its sustainability report as 'creating long-term stakeholder value by integrating economic, social and environmental responsibility into everything we do' (Litten 2005).

Sustainability Requires a New Definition of 'Value'

Organisation strategy is about value creation, or added value. Building on stakeholder theory, it has become clear to some writers that a new definition of 'value' and 'value creation' is needed if measurement systems are to focus on the right issue of sustainability (Rubenstein 1992; Hart and Milstein 2003), Post et al 2002). Implicit in current strategy discussions of 'value creation' is that

'value' is economic, measured in dollars of profit over accounting costs. This is paralleled in government accounts where Gross National Product (GNP) consists of only those items which have an economic value and where a monetary transaction has occurred. A 3% increase in GNP means that the total value of the monetary transactions in the economy have gone up by 3%, regardless of the nature, mix or prices used in those transactions. For instance a $100m increase in defence spending or anti-terorism spending has the same 'value' as $100m of education, medical or food spending.

Yet it is increasingly being questioned at national/government levels whether increases in GNP are 'good' (Cobb 1995; Hamilton 2005). While GNP has grown rapidly in developed countries for many years, measures of individual satisfaction have changed little and evidence suggests there is little relationship between individual income and satisfaction (Cobb 1995; Hamilton and Denniss, 2000). Consequently, at national and regional government levels, new measures of society growth and improvement, such as a Genuine Progress Indicator (GPI), are being proposed and tested – measures which are not simply based on adding up the value of dollar-denominated transactions (Hamilton, 1999; Clarke and Lawn, 2005; Costanza et al, 2004; Venetoulis and Cobb, 2004).

At the corporate level, (Emerson 2003) argues that 'value' is a blend of financial value and social value, with the blend varying from organisation to organisation (eg a venture capitalist might seek purely financial returns, while a not-for-profit might seek purely social value, but both – and all organisations – are in the blended value-creating business). Just as even shareholder value requires performance to be assessed on multiple dimensions, Hart and Milstein (2003) argue that sustainable value is multi-faceted and comes from the use of clean technology, meeting unmet consumer needs, pollution prevention and product stewardship. Bansal (2002) argues that sustainability relies on the intersection of all three aspects – economic, social and environmental – rather than simply being economically focussed. The Auditor General Victoria (2004) notes the overlooked issue that sustainability also requires intergenerational equity, a key aspect of the original definition.

Thus, it is quite possible for different perspectives on sustainability to conflict for an organisation. For instance, significant use of cheap material resources which are in limited supply and cannot be easily replaced or renewed may be economically beneficial for the organisation, but may not be environmentally sustainable. In terms of social perspectives, the use of cheap outsourced labour, which may not provide living wages for a community, or which may involve health risks to those people, which are not picked up or accounted for by the organisation (called 'externalities' by economists) may be economically beneficial to the organisation but detrimental to that community and society in the long run.

In summary, introducing sustainability concepts to the TBL measurement system implies that the organisation must consider its impact not only on the current society but also its impact on future generations, so that whatever practices are being pursued are able to be continued into the future.

Is sustainable performance measurement sustainable?

It could be argued that sustainability and TBL measures are simply fashions that will pass by. This would be a dangerous assumption, for several reasons.

First, the development from shareholder value to BSC to TBL organisational measurement systems is not a case of choosing one or the other. Each system builds on its predecessors, in terms of the quantity of measurements. Performance measures for shareholders have not been replaced. They are still important. 'Economic' is one of the three elements of the TBL. Existing BSC performance measures for customers and employees can be seen as part of the 'social' aspect of the TBL if we consider the community aspect of the relationship with each group.

Second, there is plenty of evidence that communities are focussing more and more on the wider responsibilities of organisations. Nike's response to community pressures to reform the labour management practices of its international suppliers, where it changed its practices to protect its reputation which had been badly damaged by that community focus on the previous practices, is a well known example. The Dow Jones Sustainability Global World Index has been developed to help the increasing number of investors who are seeking 'socially responsible' investment opportunities. Sustainability reporting is compulsory on the Paris and Johannesburg stock exchanges and UK fund managers require reports from the top 200 listed organisations in the UK (Elias 2003). The Economist Intelligence Unit (2004) found that almost 75% of large international organisations were under

pressure to come up with non-financial measures, describing those that existed currently as mediocre or poor. However, it also found that there is no evidence yet of a causal relationship between these measures and organisational financial performance.[2]

Third, the increasing recognition in the community about the parlous state of the global environment, evidenced by the attention given to the signing, or lack of signing, by countries of the Kyoto Protocol, and the community focus on a wide variety of specific environmental issues, such as water shortages, global warming, carbon emissions, melting of the polar ice caps, future energy sources, reductions in biodiversity and the peaking of global oil production all suggest these issues are rapidly multiplying. It is widely believed by individuals in the community that environmental issues will not go away and that organisational practices must change. While governments may have to legislate for changes in organisational and community environmental practices (just as they have done with social practices around employees and customers), organisations are likely to be the main institutions responsible for carrying out any necessary changes in practices.

How to measure sustainable organisational performance

It should be clear from these developments that measuring organisational performance in future will become far more complicated than the current struggle to develop appropriate balanced (economic) scorecards and to integrate the 20-25 measures in such a scorecard into understandable assessments of organisational performance by a wide variety of stakeholder groups.

So how should an organisation measure its 'sustainable' performance in future? Robins (2005) states that there are thought to be over 60 different codes for measurement and Leipziger (2003) sets out 32 complete codes. However, two of these measurement systems have achieved more support than the others to date. The SustainAbility framework represents the work of an international consulting firm while the Global Reporting Initiative (GRI) is a United Nations affiliate, whose development is supported by a large number of global corporations. They are shown in Figure 4 below, together with the Environment Sustainability Index which has been developed by the globally-influential World Economic Forum, and an academic conceptual proposal (Figge et al 2002) which provides a different perspective. What is clear from reviewing Figure 4 is the lack of any consistent approach at this point and the broad range of issues which need to be addressed.

Figure 4 here

Current Measurement Practice

Due to the complexity of the concept of sustainability, emerging practice is that organisations are developing separate 'sustainability reports' ((Jones et al 2005; O'Dwyer and Owen 2005). The development and publication of these reports, while encouraging, has raised several major issues. First, they are often not integrated with the economic reports conventionally being produced and, as such, do not assist in providing integrated frameworks, which is inconsistent with both the BSC integrated concept and the holistic sustainability concept (Auditor General Victoria 2004). Second, the information being produced is biased to report information positively for the organisation (Jones et al 2005; O'Dwyer and Owen, 2005). Third, the information is being primarily prepared for top managers, who consequently control both what is prepared and what is reported, thus reducing the value of the information to other stakeholders. Fourth, the information is either not audited, is audited at low levels, is audited patchily or is audited by people with limited known capabilities for this type of audit. Fifth, the frameworks being used for gathering, preparing, reporting and auditing information are more oriented to management needs than to other stakeholder needs (O'Dwyer and Owen, 2005). Sixth, little involvement of other stakeholder groups, which is seen as critical for implementation success, has occurred (Florida 1996, Litten 2005, Maxwell et al 1997, Rondinelli and Gyula 1996).

Conceptual Approaches to Sustainable Organisational Performance Measurement

From Figure 4, it is unclear what conceptual approaches are being taken to the development of what should be measured. Calls have been made to develop integrated sustainable performance

measurement systems (Chenhall 2005; Figge et al 2002; Hubbard, 2005). However, at this point there is little evidence of such integrated systems existing.

Robert (2000) developed a hierachical five-level systems model for thinking about sustainable development at the macro-environment level, a process which could be adapted to the organisational level to lead to a systemic approach to the measures to be chosen. The five levels were (Figure 5):

- What are the dimensions of the system being studied. For an organisation this might be defined as the organisation's ecosystem (i.e. its own activities, own locations of operation, as well as those of its suppliers, including its human economic system and social systems)
- What is the desired level of sustainability. Daly (1990) argued that three rules should be:
    - harvest rates of renewable resources should not exceed regeneration rates
    - waste emissions should not exceed the assimilative capacities of ecosystems
    - non-renewable resources should be depleted at no more than the rate of creation of renewable substitutes.
- What processes have to be undertaken to achieve these levels.
- What practical actions are in line with these processes.
- What tools and metrics should be used to measure success of these actions.

Figure 5 here

While this approach was designed for macro-environment levels of performance, the same process would be appropriate for individual organisations. In choosing the first level dimensions of the system, an organisation would take a much more localised view. For instance, a local water utility might adopting its local geographic area, its people and their interactions as the 'system'. At the second level, the organisation might consider its use of resources (renewable and non-renewable inputs to the system, eg chemical additives, land use) and wastes (outputs seen to be of no organisational value which may have ecological costs, eg chemical residues, filtered materials). At the third level, the organisation would consider specific targets, such as the amount of a particular toxic chemical that could be emitted and yet absorbed by the ecosystem. At the fourth level, it would have to decided how it was going to achieve this. At the fifth level it would have to decide what it would report to assess its success.

This approach would lead to each organisation measuring different activities, whereas current shareholder value and BSC approaches imply similar measures for all organisations (eg ROE, market share, employee satisfaction etc). However, these differences seem essential. It is hardly appropriate for a retailer to report on toxic chemical emissions and hardly appropriate for an oil producer to report on paper use/reuse/recycling. This is a consistent finding from recent empirical studies – industries and organisations focus on different measures because their context and issues are different (see for instance Jones et al, 2005). Note that this proposal is only focussed on environment issues, however, and does not specifically address social issues, which would require a different framework.

Another approach is being developed in Europe to complement the quality management principles developed originally for the Baldrige Award in the US and the Deming Prize in Japan (van Marrewick et al 2003). It is based around the European Foundation for Quality Management system, recently renamed the Business Excellence model. However, even the developers of the system acknowledge that this new European Corporate Sustainability Framework is complex, and its 'constitution, concept, conduct and control' elements are not in any way intuitively obvious or linked directly to the concepts of social and environmental sustainability.

Perhaps the most attractive conceptual approach is to consider whether social and environmental issues could be included in the BSC itself to develop a Sustainable BSC, and effectively integrating the TBL into the current BSC framework. Conceptually, the current BSC looks at internal and external stakeholders and short term and long term issues, all of which the organisation needs to pick up intergenerational issues required by a sustainability focus. Figge et al (2002) argued that the BSC is meant to be a top down, integrated, causal, linked system of measures that contribute to achieving the organisation's strategy. They argued that including social and environmental measures could be done in one of three ways:

- integration within the existing four perspectives (eg measuring water use and energy efficiency under short term efficiency, and movement towards recyclable renewable resources under long term growth and development)
- addition of a non-market element in the scorecard (eg adding environmental, or social, or both, as separate elements)
- development of a separate, but linked, environmental and social scorecard.(eg adding several separate environmental and social sections such as energy use, wastage, community impact etc as separate sections in a new, separate scorecard, perhaps similar to the current sustainability reports that are now emerging).

The first proposal would require social and environmental measures to *replace* existing economic measures or to increase the number of measures in each of the four existing perspectives. This would mix economic, social and environment issues and seems a messy solution without giving focus to the new areas. Given the complexity of the social and environmental issues that need to be addressed, we also believe it would be inappropriate to include them in the current four perspectives as they would 'crowd out' existing measures.

The third proposal, which is consistent with the current developments of a separate sustainability report, at least reduces the appearance of a holistic, integrated BSC and seems inclined to lead to the reductionist and subordinate nature of this report, so we do not feel this is the best way to proceed. Therefore, we propose that the BSC should be expanded to six perspectives, including environmental and social perspectives as separate perspectives to develop a sustainable BSC, or SBSC. This is effectively a TBL but within the existing framework that organisations are currently using, making it much easier to implement.

An Attempt to Develop a Sustainable BSC for Measuring Organisational Performance

Many suggestions have been made about what should be included in the 'environmental' and 'social' measures. The GRI approach contains 28 areas for measurement and SustainAbility contains 9 areas (see Figure 4). Each writer proposes a different set of measures, all well justified. Yet, consistent with the 80/20 Pareto principle, the biggest strategic impact will be made by focussing on a small number of key indicators. This is consistent with the BSC philosophy, with the need to focus on a small number of strategic measures at the organisational level and with the idea that the brain simplifies information if it becomes too complex.

Figure 6 suggests 5-6 specific areas in which one or a very small number of factors might be reported. Each organisation, being in a specific industry facing specific issues, will develop its own set, but general guidance can be given here. The industry specific factor reflects the fact that each industry will find itself facing specific issues not generally relevant, but critical for that particular industry and/or organisation (Hubbard, 2004).

Figure 6 here

As well as reporting the specific result, as with financial reporting, a trend should be reported and ideally a benchmark, so that the actual outcome can be compared to some industry standard, best practice or target. This enables an analyst or reader to form some conclusion about the level and direction of the performance, a key problem with current reporting. For instance, a survey of 40 large listed organisations' reporting found that only 34% of the reporting was judged to be neutral, only 15% was related to what the survey regarded as society's most important expectations and up to 96% of material reported in one case was found to be favourable reporting about the organisation (Newson 2002). Jones et al (2005) found that the material reported, even that which was actually unfavourable, was overwhelmingly favourably reported, that very few of the many GRI areas were actually measured (environmental incidents, greenhouse gas emissions, water usage, community ijmpact and injury and lost time days were the only common measures), that reporting was positively related to organisational size and political visibility, that there was little reporting on how good actual performance was and little consistency in what was reported or how it was measured (Jones et al 2005). This suggests that the information currently being reported cannot be taken at face value.

The approach outlined above has one significant limitation: it does not specifically address the issue of inter-generational equity which forms part of the definition of 'sustainability'. Others have noted the extreme difficulty of measuring this issue (Auditor General Victoria, 2004, p 12):

> As we have not achieved equity in current generations and are uncertain of the needs of future generations, this principle is difficult to apply…policy responses have therefore tended to be vague…the idea of equity stretching across generations is linked to planning for the longer term. Intergenerational equity considerations can be applied through, for example, long term approaches to workforce planning, knowledge management and asset management.

Simplifying to a Single Measure of Sustainable Organisation Performance

Current attempt to report environment and social information, and models proposed by almost all authors are complex. However, the value of this SBSC to an inexpert public would be magnified greatly if it were possible to simplify the information reported and to develop consistent measures and frameworks. For instance, organisations in the forest and chemical industries in the US have focussed their assessment of their environmental performance on the single measure Toxic Release Inventory annual score. Here, the public highlighting of major polluters each year has had a very significant impact on emissions (Sharma 2005).

It could be argued that the simplification process will lose valuable information and lead to glib assessments of performance, which may even be counter-productive (Lefebvre et al 2003, Banuri and Najam 2002). While we might all like to be able to use a single number, such as shareholder total return, return on equity or market share to assess organisational performance, the development of the BSC itself has been so well received because it demonstrates that organisations are complex and complex measures are therefore needed.

Nevertheless, pursuing simplification, Atkisson and Hatcher (2001) have suggested a four quadrant alternative to the BSC to incorporate social and environmental measures and to add those measures into a single indicator. Their approach is based on Daly's pyramid (1973) of four elements: Nature; Economy; Society and human Well-being (i.e. the health, happiness and fulfilment of individuals).[3] These correspond to the TBL plus the individual component, but have the catchy compass-like directions of N, E, S and W. This 'compass' approach contains an unweighted score for each of the four elements and an unweighted overall score for the four scores, making for a single number for the 'overall sustainability index'.

The approach of developing a single indicator is intuitively attractive in terms of measuring performance and is consistent with the single indicators of GNP or the more inclusive GPI at regional and national levels. It has been trialled in the city of Orlando, which has embraced the concept of sustainability for a city. Orlando selected 6-8 indicators for each point of the compass, meaning that the number of indicators was not significantly different from that of a normal BSC (see Figure 7).

Figure 7 here

Issues to Address in Creating a Single Indicator

This approach to developing a single indicator is recommended for the SBSC proposal here, which we have developed for a hypothetical organisation in Figure 8 below. Figure 8 begins with the four components of a conventional BSC and adds a social and an environment component to develop a 6 component BSC. Each of the six components are first summarised into a single rating. Then the six ratings are summarised in the middle box (Organisational Sustainabile Performance Index) to a single score. The single score shown here is also shown for the previous year to indicate the trend for the index (are we getting better or worse, and what areas are the cause of that change?).

Figure 8 here

Behind the simplicity of this SBSC approach are several important issues which impact on the final – single – outcome reported. We focus here on the social and environment components of the SBSC, but the issues are exactly the same for all other BSC components.

1. **What indicators to select?**

This is difficult as, typically, there will be some disagreement about which indicators to use, particularly when only a small number are to be selected. For an organisation, this may be less difficult than for a widely diverse community such as a city, but it is still a very significant issue.

For social performance, we have chosen one indicator for each of the major stakeholder groups without particular strategic influence. Employees, customers, suppliers and the community are all affected by the organisation and the organisation has an interest in having each of these groups positively viewing the organisation. We have also chosen a measure of the contributions made by the organisation to the community as a percentage of sales (to indicate relative size, similar to the R&D/sales indicator often used to measure commitment to R&D).

For environmental performance, we have sought the most commonly proposed areas (materials, energy and water use and emissions) and recognised that each organisation, being in a particular industry, is likely to have a unique factor of specific relevance to that industry (eg biodiversity impact for mining and agriculture companies).

2. **The data must be collected.**

Most organisations embarking on this process find that they do not have the data available and must find ways to collect it before they can begin to assess their performance. In social performance, customer and employee measures should exist from surveys, but those surveys could be extended to cover suppliers and community, using similar methodologies. For environment performance, material, energy and water use will be known but emissions may require new instruments and measures to be developed.

3. **The scales must be chosen.**

How do we 'add' employee, customer, supplier and community satisfaction or material, energy and water use and emissions? This is actually no different from the problem in a conventional BSC. The usual process is to 'rate' the performance of each element against expectations – have we done better or worse than expected – and add the ratings, on a weighted or unweighted basis. 'Expectations' usually includes some sense of improved performance, either against past performance or against best practice or industry averages, but, at this stage of the development of these indicators, these may not be available. In Figure 8, we have used a 1 (bad) to 5 (good) scale for each element in each component so that a score of '3' might be interpreted as 'average'

4. **Issues which are difficult to assess quantitatively must be included and scored.**

The process we are describing relies on quantitative assessments – numbers – for all indicators, so that any important element that cannot be quantified (eg justice, egalitarianism, fairness) may 'disappear' from the system and thus not be considered 'important'.

Here we again return to the principles of the BSC. If an indicator is seen as important, it must be included (eg 'innovation' is often included in existing BSCs). If it is to have an effect on behaviour, it must be measured (what is measured counts). All the 'satisfaction' measures listed in the social performance component are, in fact, intangibles that we are converting into 'tangibles' by assigning them a quantitative numerical score. On the other hand, if we leave them out, we tend to forget them in our decisionmaking processes. Yes, the issues are difficult but no, they are not insurmountable and are in fact already used in the current BSC processes.

5. **The indicators must be aggregated within each section of the SBSC.**

In the Orlando case, they were simply averaged, to give transparency to the process, given the lack of experience and disagreement about the relative importance of each measure. This implicitly weights each factor equally. In Figure 8 we have applied the same process, but different weights may be applied. For instance, in some industries (eg coal and electricity), 'emissions' may be the most important and 'water use' may be relatively unimportant. Reflecting this in the weighting system will result in a more appropriate overall score.

6. **The six areas must be aggregated into a single 'overall' number.**

Again Orlando used the simple averaging process and we have followed this approach, but areas could be weighted. For instance, not-for-profits would presumably rate their 'financial performance' of lower importance than 'customer/market' or 'social' performance, so that different weightings would be appropriate.

7. **The process of presentation must be considered.**

Orlando developed high quality visuals, focussing on graphical, not numerical, presentation, and using colour to indicate performance (green for good, red for bad, yellow for caution). It also developed a 'story' around the numbers and graphs to interpret the numbers and the overall picture for those receiving the message. Many organisations do this in their BSCs now to present a navigational scorecard (Emerson 2003). Figure 8 presents only a set of numbers and it takes some time to interpret. But here we are focussing on the ideas, not the presentation!

Despite these issues, this approach of adding measures and components to get a single result has many desirable features. Indeed, one of the major problems of most existing BSC analyses is the inability of participants – or managers – to be able to intuitively aggregate the disparate numbers from the existing four quadrants. The introduction of social and environmental measures is sure to exacerbate this problem but, if countries can do this to get a GNP or GPI figure, surely organisations can construct something similar. The idea seems highly attractive as a way to integrate these measures and bring focus to an extremely difficult – but extremely important – process. So the framework is there, if the will exists.

Limitations

Of course, there are many limitations with the SBSC which we have developed in Figure 8. Every critic will claim that it ignores some important information – key indicators not reported, lack of trend lines for each key indicator, key indicators not linked together etc. But the tradeoff is its simplicity and its likely acceptance and understanding by most senior managers and analysts, whereas the alternative – extremely complex and individual reporting – will not actually be usable, however desirable and theoretically superior it may seem.

In financial measures of performance, a balance sheet, profit and loss and cash flow statement each have only a small number of required items, but they do have many pages of notes to explain the background and meaning of those items, which an analyst can work through to better understand the meaning of the summary data. This approach could also be applied here. The SBSC provides the high-level summary, with detailed notes to provide supporting data.

Summary and conclusions

Organisations are under increasing pressure to report on their social and environmental performance, and not simply their economic performance. They will be expected to measure their sustainable performance too. Applying stakeholder theory, this is a very reasonable expectation, but it requires organisations to conceptualise 'value' differently and to design their strategy differently from under a shareholder value perspective.

There are many competing frameworks for reporting and the breadth of possible reporting is almost limitless and current examples are in rudimentary form. However, adapting the BSC to get a Sustainable BSC, or SBSC, seems a feasible option for most organisations. Conceptually, reporting will vary from organisation to organisation and industry to industry. Nevertheless, an approach that aggregates measures within each area and then across areas, offers ways to simplify the outcome and make it comprehensible, similar to the way we measure national progress or well being.

Given the complexity of concepts, the rudimentary current state of reporting, and the current lack of information on items that may need to be reported, simpler solutions will be necessary to make this type of reporting comprehensible to the wide group of stakeholders who are interested in, and affected by, the operations of the organisation.

Figure 1: An Example of the Balanced Scorecard

Financial Performance

Measure	Performance
Sales growth	3%
Return on Sales	6.8%
Return on assets	5.1%
Return on equity	15.5%
Gearing	73%

Internal Process Performance

Measure	Performance
Productivity	3.8%
Labour Turnover	12%
Avergae unit production time	4 days
Working capital/sale	10%
Capacity utilisation	73%

Learning and Development Performance

Measure	Performance
New product development	1
New market entry	2
R&D/Sales	2.5%
Training/Sales	5.5%
Investment/Total Assets	10%

Customer/Market Performance

Measure	Performance
Market share	32%
No. new customers	12,350
Returns	1.5%
Defects	2.8%
Order cycle time	7 days

Figure 2: The Triple Bottom Line Measuring System

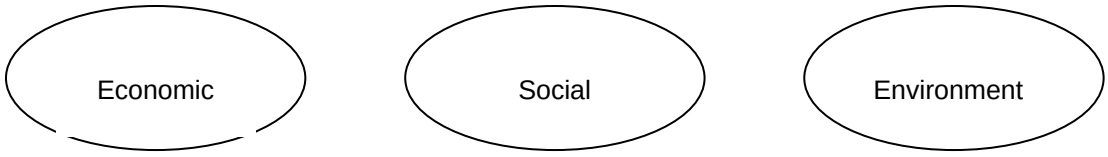


FIGURE 3: The Evolution of Environmental Management Systems

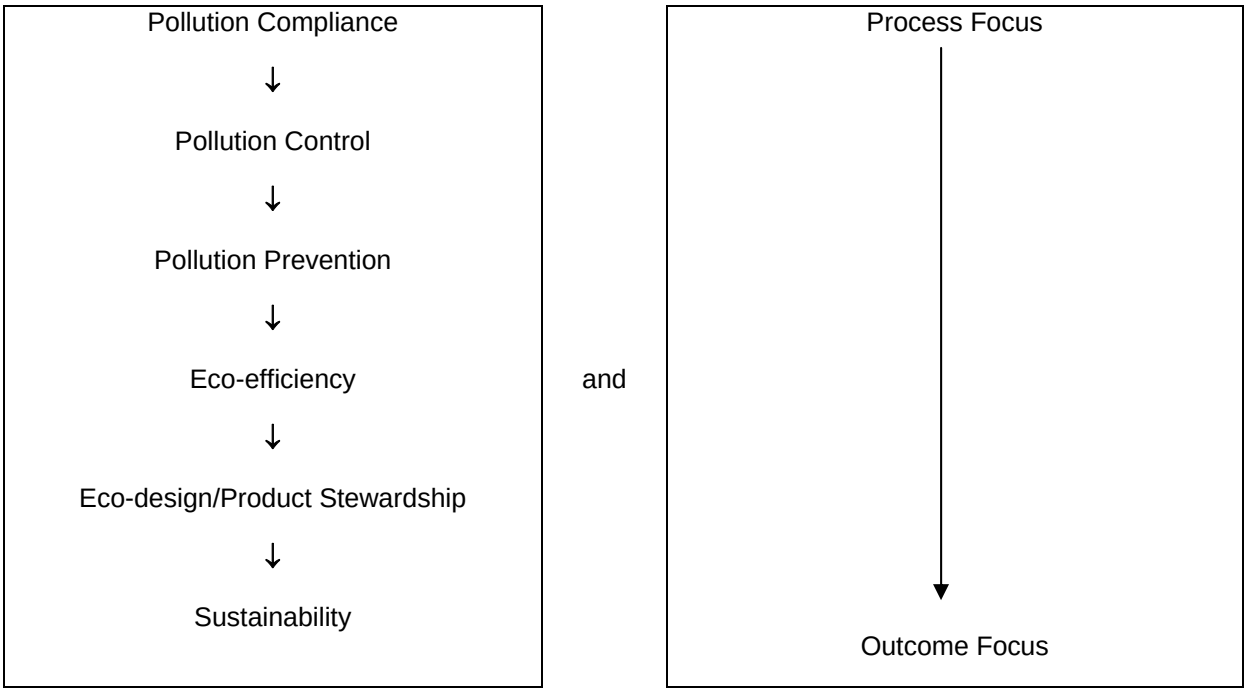


Figure 4: Some Examples of Proposed Environmental and Social Performance Areas to Measure

SustainAbility	**Global Reporting Initiative**	**Environmental Sustainability Index**	**Figge et al**
Ethics, values and principles	Materials used	Air quality	Emissions (air, water and soil)
Accountability and transparency	Energy used	Biodiversity	Waste
Triple bottom line commitment	Water use	Land	Material input/material intensity
Environment process focus	Biodiversity	Water quality	Energy intensity
Environment product focus	Emissions, effluents and waste	Water quantity	Noise and vibrations
Socio-economic development	Suppliers	Reducing air pollution	Waste heat
Human rights and workplace conditions	Products and services	Reducing ecosystem stresses	Radiation
Engaging business partners	Compliance	Reducing population growth	Direct interventions on nature and landscape
Engaging non-business partners	Transport	Reducing waste and consumption pressures	Direct stakeholders – internal
	Employment	Reducing water stress	Direct stakeholders – in the value chain
	Labour/management relations	Natural resources management	Direct stakeholders – in the local community
	Health and safety	Environment health	Direct stakeholders – in

			the society
	Training and education	Basic human sustenance	Indirect stakeholders – internal
	Employment diversity and opportunity	Reducing environment-related natural disaster vulnerability	Indirect stakeholders – in the value chain
	Employment non-discrimination	Environmental governance	Indirect stakeholders – in the local community
	Freedom of association and collective bargaining	Eco-efficiency	Indirect stakeholders – in the society
	Child labour	Private sector responsiveness	
	Disciplinary practices	Science and technology	
	Security practices	Participation in international collaborative efforts	
	Indigenous rights	Greenhouse gas emissions Reducing transboundary environmental pressures	
	Community impact		
	Bribery and corruption		
	Political contributions		
	Competition and pricing		
	Customer health and safety		
	Product and services		
	Advertising		
	Respect for privacy		

Figure 5: Five Levels of Conceptual Measurement Systems

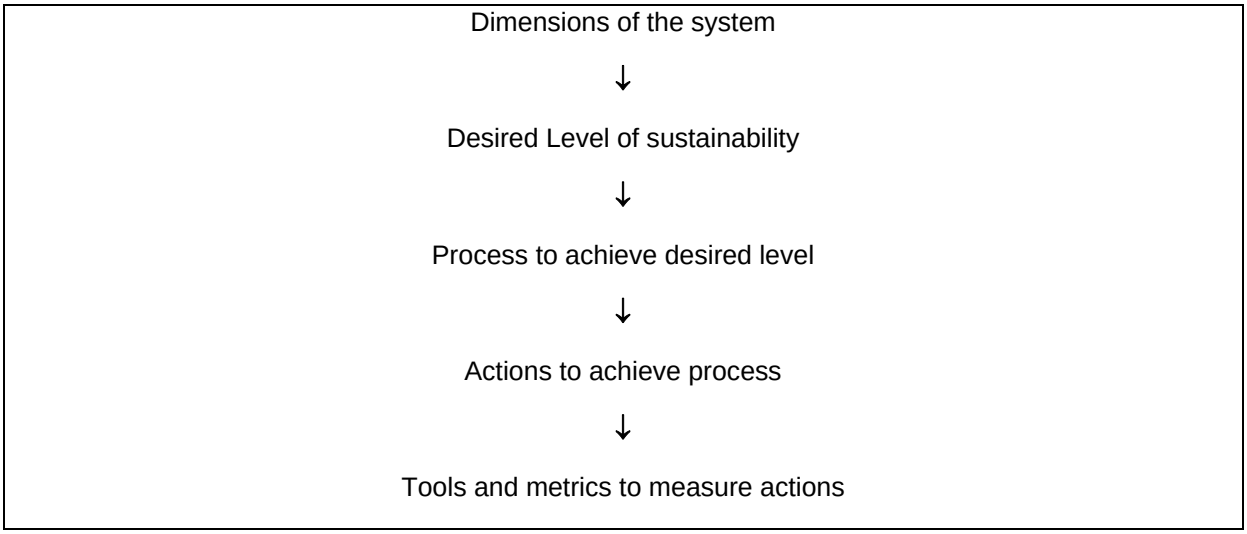


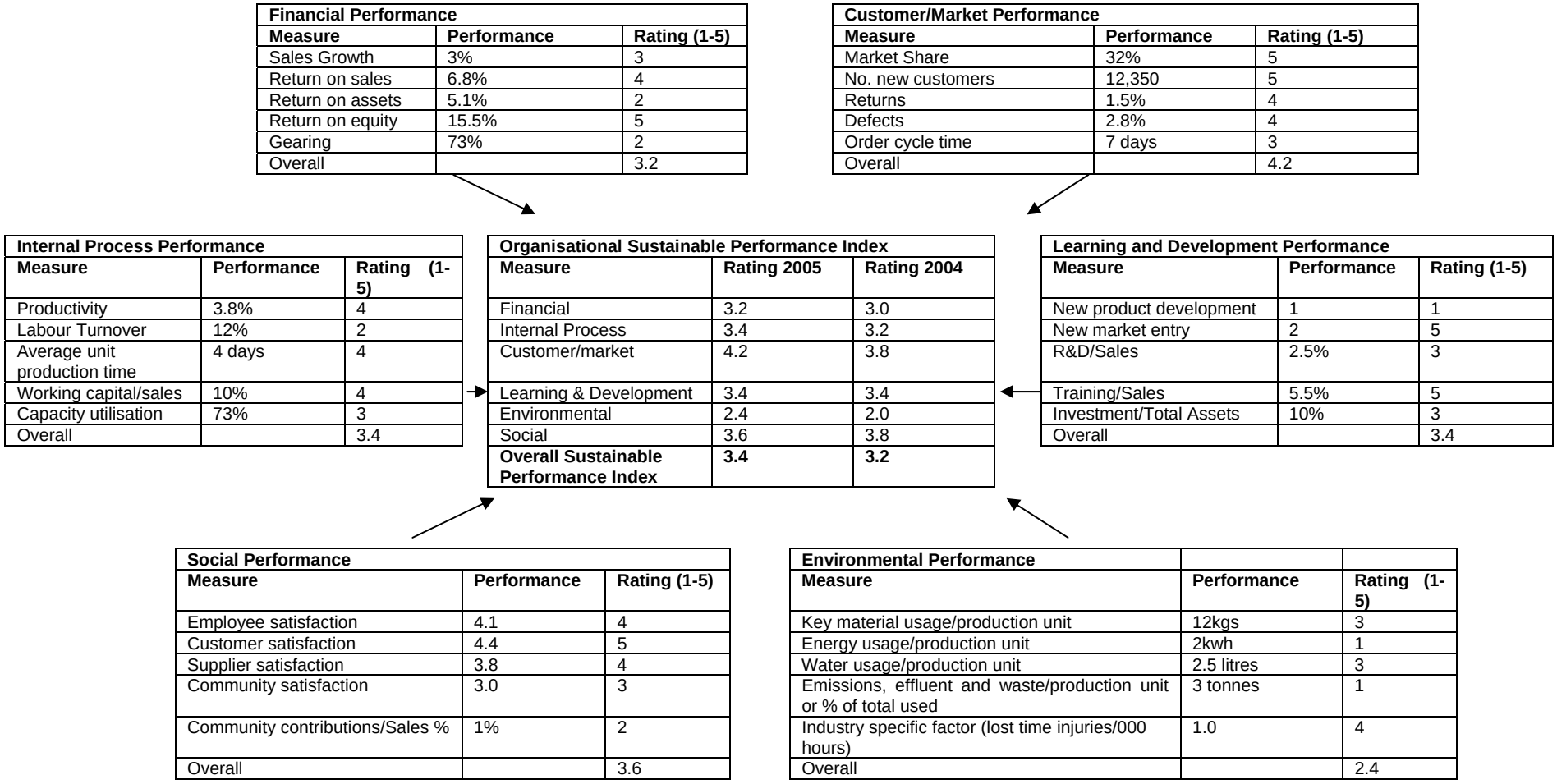
Figure 6: Suggested Social and Environmental Indicators for an Expanded BSC

Environmental Indicators	Social Indicators
Key material usage/production unit	Employer satisfaction
Energy usage/production unit	Customer satisfaction
Water usage/production unit	Supplier satisfaction
Emissions, effluent and waste/production unit or % of total used	Community satisfaction
Industry specific factor	Community contributions/sales %
	Industry specific factor

Figure 7: An Index of Sustainable Organisational Performance Measurement

	2000	2001	2002	2003	2004
N (Nature)	41	46	43	52	56
S (Society)	56	58	60	57	52
W (Well-being)	66	65	65	67	65
E (Economy)	74	74	71	78	80
Overal Sustainable Performance	59.3	60.8	60.5	63.5	63.3

Figure 8: A Hypothectical Sustainable Balanced Scorecard Added to Get to a Single Indicator



Financial Performance		
Measure	**Performance**	**Rating (1-5)**
Sales Growth	3%	3
Return on sales	6.8%	4
Return on assets	5.1%	2
Return on equity	15.5%	5
Gearing	73%	2
Overall		3.2

Customer/Market Performance		
Measure	**Performance**	**Rating (1-5)**
Market Share	32%	5
No. new customers	12,350	5
Returns	1.5%	4
Defects	2.8%	4
Order cycle time	7 days	3
Overall		4.2

Internal Process Performance		
Measure	**Performance**	**Rating (1-5)**
Productivity	3.8%	4
Labour Turnover	12%	2
Average unit production time	4 days	4
Working capital/sales	10%	4
Capacity utilisation	73%	3
Overall		3.4

Organisational Sustainable Performance Index		
Measure	**Rating 2005**	**Rating 2004**
Financial	3.2	3.0
Internal Process	3.4	3.2
Customer/market	4.2	3.8
Learning & Development	3.4	3.4
Environmental	2.4	2.0
Social	3.6	3.8
Overall Sustainable Performance Index	**3.4**	**3.2**

Learning and Development Performance		
Measure	**Performance**	**Rating (1-5)**
New product development	1	1
New market entry	2	5
R&D/Sales	2.5%	3
Training/Sales	5.5%	5
Investment/Total Assets	10%	3
Overall		3.4

Social Performance		
Measure	**Performance**	**Rating (1-5)**
Employee satisfaction	4.1	4
Customer satisfaction	4.4	5
Supplier satisfaction	3.8	4
Community satisfaction	3.0	3
Community contributions/Sales %	1%	2
Overall		3.6

Environmental Performance		
Measure	**Performance**	**Rating (1-5)**
Key material usage/production unit	12kgs	3
Energy usage/production unit	2kwh	1
Water usage/production unit	2.5 litres	3
Emissions, effluent and waste/production unit or % of total used	3 tonnes	1
Industry specific factor (lost time injuries/000 hours)	1.0	4
Overall		2.4

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