EDITORIAL

A capability framework for managing social and environmental concerns

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1 Sustainability—a journey of learning

While there is a broad consensus supporting the principles of sustainable development, it has been difficult to achieve a similar consensus on an operational definition that can be used to assess the effectiveness of specific actions. Sustainable development has been described as more a journey of learning than a particular destination (Boons and Wagner 2009; Kates et al. 2005; National Research Council 1999; van Kleef and Roome 2007). Companies have struggled to define key performance indicators that describe causal linkages that can be leveraged to drive sustainability initiatives (Epstein and Roy 2001). Stakeholders want common measures of sustainability performance that can be used to hold companies accountable and inform consumer choices, and therefore push for consensus standards, such as the Global Reporting Initiative G3 guidelines or the proposed ULE-880 sustainability for manufacturing organizations standard. Thus, companies are faced with conflicting demands to develop flexible metrics for learning and standardized metrics for accountability (Swarr and Fava 2007).

It has also been argued that because sustainability is a complex goal that is viewed (and evaluated) differently by different stakeholders, it is necessary to move beyond the need for a consensus on definitions and quantified measures and focus on developing a practical process for action that acknowledges the irreducible plurality of perspectives and modes of understanding (Frame and

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Brown 2008; Meppem and Gill 1998). Simon (1978) noted that when the rationality of an action depends upon the actions of other independent stakeholders, then there can be no consensus on what constitutes rational or appropriate behavior. A rational process is as important as a rational outcome. This suggests that efforts to assess sustainability initiatives must consider both the process used as well as the outcomes achieved.

2 LCM capability framework for business

UNEP and SETAC are promoting a capability framework for life cycle management that is designed to complement various initiatives that measure sustainability performance outcomes. The goal of the capability framework is to build the capacity of individual organizations to effectively act on their own behalf, based on their understanding of the local context and according to their values and priorities (Swarr et al. 2010). The capability framework complements initiatives to measure sustainability performance, which constitute an ongoing dialogue with stakeholders about their priorities for sustainability outcomes. The capability framework emphasizes process discipline for effective execution, and sustained high performance depends on doing both the "right" things the "right" way.

Capability maturity models have a long history in process quality improvement initiatives. The models provide a structured sequence of activities for improvement, showing where to start and how to best learn from the experiences of companies with more mature programs. However, many of the capability models developed to date are highly complex and inappropriate for small-to-medium-sized enterprises (Sukhoo et al. 2007). The life cycle management (LCM) capability framework uses a focus on decision-making to

provide a simple and practical basis for assessing organizational maturity. The goal of LCM is to make decisions with a full awareness of the future and remote consequences of a choice on stakeholders and the natural environment. Thus, the maturity with which as organization manages social and environmental concerns can be assessed based on who is involved in the decision-making process, the sources and types of information used to support the decision, and the key performance indicators used to monitor implementation and measure decision effectiveness. The LCM capability framework gradually expands the sphere of decision-making to include the value chain and ultimately civil society. The information and metrics also become more complex as the organization matures, starting with simple binary yes–no compliance measures and moving through eco-efficiency and ultimately to integrated sustainability and resiliency assessments. The LCM capability model is summarized in Table 1.

3 Balanced performance assessments

Capability models were developed because it was recognized that traditional quantified performance measures were inadequate for assessing progress toward achieving desired behavior changes or the overall effectiveness of improvement strategies (Kaner and Karni 2004; Nightingale and Mize 2002). Companies are socio-technical systems, and the objectives sought must be achieved using an approach that is compatible with those objectives (Keating et al. 2001). The capability framework promotes a disciplined and inclusive decision-making process that emphasizes systemic solutions, collaboration, and transparent communication. Quantified performance measures are important

for guiding and evaluating actions. However, for effective learning it is critical the measures themselves do not become the end goal. Goodhart's law states that once an indicator or other surrogate measure is made the target for the purpose of conducting a policy, then the measure is no longer effective for guiding policy actions (Wikipedia 2010). The process used to determine critical aspects of sustainability and how to measure them is equally important as the resulting numbers.

Sustained high performance requires a balance between top-down results-driven performance improvement initiatives and bottom-up organizational learning and commitment to a meaningful purpose (Beer 2001). The various sustainability performance measures are essential to holding companies accountable and to evaluating effectiveness of their sustainability initiatives. The environment will be the final arbiter of the effectiveness of efforts to preserve the vitality of critical eco-system services, and these physical realities cannot be ignored. However, Albert Einstein warned that, "Not everything that can be counted counts, and not everything that counts can be counted." Within these physical constraints, different regions and cultures will have different perspectives on quality-of-life or social equity issues. It is important to recognize that any evaluation of company sustainability efforts will be dependent on the perspectives and values of the evaluator. The path to sustainability will depend on a fair decision-making process that facilitates a common understanding of the situation, even when there are conflicting economic interests and/ or cultural values. The capability framework is a necessary complement to the performance indicators to ensure a decision-making process congruent with the end goals of sustainability.

Table 1 The LCM capability model

Level	Description	Span of control / influence	Metrics	Decision process	Business case
1—Ad hoc	Chaotic, disorganized—will not survive in global economy				
2—Qualified	Predictable projects	Project	Compliance—yes/no Process outputs	Team-based visible trade-offs	Risk avoidance
3—Efficient	Management system for consistent results	Enterprise	Process inputs/outputs Eco-efficiency	Rule-based trade-offs to achieve enterprise goals	Improved operating margins Labor and resource efficiency
4—Effective	Value chain performance optimized	Value chain	Cradle to grave, integrated across value chain	Fact-based to anticipate value chain trade-offs	Top line growth, innovative products, new markets
5—Adaptive	Ongoing stakeholder dialogue, system innovation	Society	Sustainability measures Resiliency	Value-based to co-develop business goals and social expectations	Strong balance sheet Long-term competitive advantage

References

Beer M (2001) How to develop an organization capable of sustained high performance: embrace the drive for results-capability development paradox. Organ Dyn 29(4):233–247

Boons F, Wagner M (2009) Assessing the relationship between economic and ecological performance: distinguishing system levels and the role of innovation. Ecol Econ 68:1908–1914

Epstein MJ, Roy M-J (2001) Sustainability in action: identifying and measuring the key performance drivers. Long Range Plann 34:585–604

Frame B, Brown J (2008) Developing post-normal technologies for sustainability. Ecol Econ 65:225–241

Kaner M, Karni R (2004) A capability maturity model for knowledge-based decisionmaking. Inf Knowl Syst Manage 4:225–252

Kates RW, Parris TM, Leiserowitz AA (2005) What is sustainable development? Goals, indicators, values, and practice. Environment 47(3):9–21

Keating CB, Fernandez AA, Jacobs DA, Kauffmann P (2001) A methodology for analysis of complex sociotechnical processes. Bus Process Manage J 7(1):33–50

Meppem T, Gill R (1998) Planning for sustainability as a learning concept. Ecol Econ 26:121–137

National Research Council (1999) Our common journey: a transition toward sustainability. National Academic, Washington, D.C

Nightingale DJ, Mize JH (2002) Development of a lean enterprise transformation maturity model. Inf Knowl Syst Manage 3:15–30

Simon HA (1978) Rationality as a process and product of thought. Am Econ Rev 68(2):1–16

Sukhoo A, Barnard A, Eloff MM, Van der Poll JA (2007) An evolutionary software project management maturity model for Mauritius. Interdiscip J Inf Knowl Manage 2:99–118

Swarr TE, Fava J (2007) A capability model for life cycle management. Paper presented at the LCM2007: Third International Conference on Life Cycle Management, August 27–29, 2007. Zurich, Switzerland

Swarr TE, Fava J, Jensen AA, Valdivia S, Vigon B (2010) A capability framework to promote life cycle management practices in lower tier suppliers. Paper presented at the SETAC North America 31st Annual Meeting. Oregon, Portland

van Kleef JAG, Roome NJ (2007) Developing capabilities and competence for sustainable business management as innovation: a research agenda. J Clean Prod 15:38–51

Wikipedia (2010) Goodhart's Law. Retrieved 15 November 2010, from http://en.wikipedia.org/wiki/Goodhart's_law

For more information on the UNEP- SETAC capability framework for business visit the project collaboration website: http://www.unep_cmm.airset.com.