CENTER FOR SUSTAINABLE ORGANIZATIONS

Corporate Sustainability Metrics

Guidelines for Designing and Implementing Context-Based Sustainability Quotients

Developed by the
Center for Sustainable Organizations
www.sustainableorganizations.org

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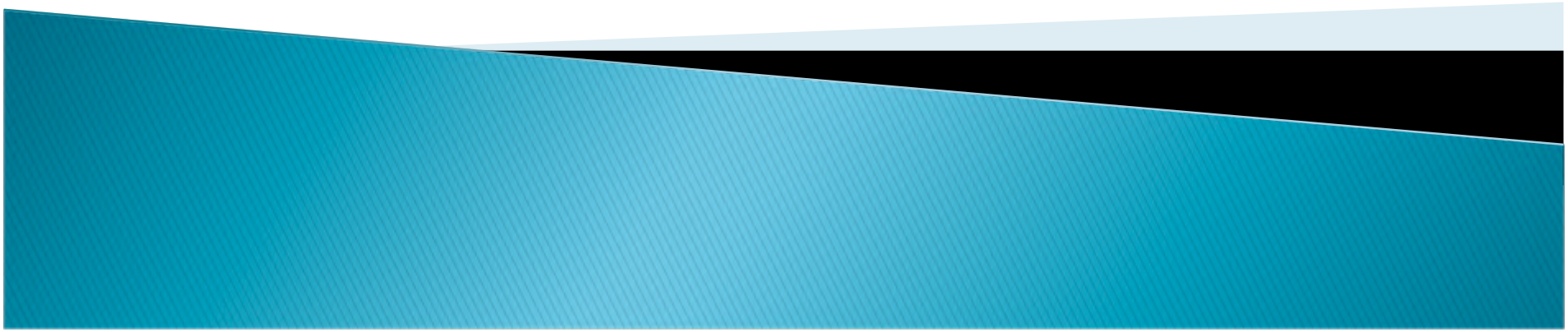

Functional Requirements

- Must express the non-financial performance of an organization (e.g., triple bottom line performance)
  - Environmental
  - Social
  - Economic (not the same as financial performance)
- Should be expressed at the level of an organization, or some subset thereof
- Should support the need to know whether an organization's operations are sustainable in context-based terms, not just relative 'more or less' terms

Technical Requirements

- Solution should make quantitative analysis and scoring possible
- Solution should be context-based (metrics should express performance relative to actual social, environmental, and economic conditions in the world)
- Solution should refer to organizational activities or operations as the thing being measured
- Solution should be grounded in human well-being (i.e., an organization's operations are sustainable or not depending on their impacts on stakeholder well-being)

The Solution

- "Sustainability Quotients"
  - Denominators express standards of performance
  - Numerators express actual performance
- Scoring convention
  - If denominators express not-to-exceed levels of impact, quotient scores of >1.0 are unsustainable
  - If denominators express not-to-fall-below levels of impact, quotient scores of <1.0 are unsustainable
- General formulation:

Sustainability Performance = Actual Impacts/Normative Impacts

The Solution (cont.)

- Impacts on What?
  - Vital (non-financial) capitals in the world that people rely on for well-being:
    - Natural Capital
    - Human Capital
    - Social Capital
    - Constructed (built) Capital
- Organizational impacts that have the effect of preserving, producing and/or maintaining vital capitals in the world at levels required to ensure basic human well-being are sustainable; impacts that have the opposite effect are unsustainable

Metrics Take Form of Quotients

$$\text{Sustainability Performance}^{*} = \frac{\text{A measure of impact on a vital capital}}{\text{A standard or norm for what the impact on the same vital capital ought to be in order to ensure stakeholder well-being (i.e., for the impact to be sustainable)}}$$

**Where:*

- For impacts on *natural* capital, quotient scores of ≤ 1.0 = sustainable, > 1.0 = unsustainable
- For impacts on *human, social* or *constructed* capital, quotient scores of ≥ 1.0 are sustainable, < 1.0 are unsustainable

Source: McElroy, 2008

Sustainability Quotients for the *Environmental* Bottom Line

$$\text{Sustainability Performance}^{*} = \frac{\text{Actual Impact on Carrying Capacity of } \textit{Natural Capital} \text{ Resulting From Organizational Operations}}{\text{Normative Impact on Carrying Capacity of } \textit{Natural Capital} \text{ Resulting From Organizational Operations}}$$

**Where:* Scores of ≤ 1.0 = sustainable, > 1.0 = unsustainable

Sustainability Quotients for the *Social* and *Economic* Bottom Lines

$$\text{Sustainability Performance*} = \frac{\text{Actual Impact on Carrying Capacity of } \textit{Anthro Capital} \text{ Resulting From Organizational Operations}}{\text{Normative Impact on Carrying Capacity of } \textit{Anthro Capital} \text{ Resulting From Organizational Operations}}$$

**Where:* Scores of $\geq$ 1.0 = sustainable, $<$ 1.0 = unsustainable

*Note: Anthro capital = human, social, and constructed (or built) capitals

Examples – Triple Bottom Line

- Sample metrics for the environmental bottom line:
  - Greenhouse gas emissions (numerator) measured against the assimilative capacity of the atmosphere to absorb such emissions (denominator)
  - Fresh water use (numerator) measured against the availability of renewable fresh water supplies (denominator)
  - Fossil fuel use (numerator) measured against the rate of use of renewable alternatives (denominator)
  - Solid waste emissions (numerator) measured against the availability of landfill capacity (denominator)

Examples (cont.)

- Sample metrics for the social bottom line:
  - Contributions to climate change mitigation efforts (numerator) measured against standards for what such contributions ought to be in order to stabilize greenhouse gas concentrations to safe levels
  - Contributions to public health programs (numerator) measured against standards for what such contributions ought to be in order to ensure human well-being (denominator)
  - Contributions to public infrastructure measured against standards for what such contributions ought to be in order to ensure human well-being (denominator)

Examples (cont.)

- Sample metrics for the economic bottom line:
  - Impacts on community economic conditions (numerator) measured against standards for what such impacts ought to be in order to ensure human *economic* well-being (denominator)
  - Impacts on employee wages (numerator) measured against local livable wage standards (denominator)
  - Impacts on foreign supplier working conditions (numerator) measured against fair trade standards for what such impacts ought to be in order to ensure human *economic* well-being (denominator)

Summary

- Sustainability metrics must express performance relative to standards of performance
  - i.e., they must include *sustainability context!*
- Quantitative quotients can be used to do so
  - Numerators express actual impacts
  - Denominators express normative impacts (standards)
- The impacts of interest here are those on vital capitals….
- …as required to ensure human well-being
- Sustainability metrics should be designed, accordingly

Thank you!

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