Prioritisation of Sustainability Issues using Materiality Analysis
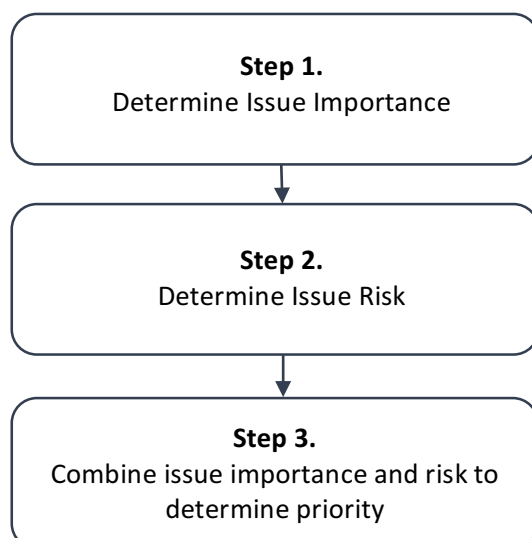
There are thousands of sustainability indicators which could be monitored by an enterprise. A prioritisation helps to establish an imperative for adopting sustainability indicators as well as identifying important gaps in a sustainability trajectory.

Methodology

The prioritisation developed by the NZSD is based on the concept of materiality. Material issues in sustainability include those issues that have a direct or indirect impact on an organization's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society.

The prioritisation process uses meta-analytic and content analysis techniques to assign materiality rankings to a range of sustainability issues. The process draws on multiple information sources including surveys, policy documents, scientific journals, and industry reports, amongst others. A three step Process is used as illustrated by Figure 1.

Figure 1: *A Three step Prioritisation Process*

Step 1.
Determine Issue Importance

Step 2.
Determine Issue Risk

Step 3.
Combine issue importance and risk to determine priority

- A formal process should be used to select appropriate sustainability indicators

- Materiality analysis provides a robust method for prioritising indicators

- Prioritisation should account for multiple stakeholders' intersts

The first step is to determine the importance of an issue. Importance is a measure of materiality and can be derived from multiple external stakeholder information sources. To derive a level of importance for an issue, the information sources are codified and ranked.

Step two requires risk to be calculated for the issues. Risk is understood in the prioritisation process to include the potential severity of consequences an issue could have, and the likelihood of harm from an issue. The likelihood of harm is a function of the probability of a particular issue creating a consequence.

Accounting for Multiple Perspectives

Information sources selected for prioritising indicators need to take into account a diverse array of stakeholder perspectives, as well as covering different spatial scales or levels of relevancy. Figure 2 illustrates the different stakeholder perspectives and spatial scales to be considered. The four circles represent different stakeholder perspectives. Scientific knowledge is important for understanding the consequences of an issue, as well as informing policy formulation and societal perceptions. Regulation to address sustainability issues can have a direct impact on organisations through added costs or restrictions. Societal preferences and consumer demand relating to sustainability can influence the behaviour or

viability of businesses. Finally, each industry has unique requirements and impacts that need to be considered, as they each affect and

are influenced by sustainability in different ways. In addition, wider business initiatives, including voluntary certification or assurance schemes can affect a business's ability to compete in a market. This is not an exhaustive list of stakeholder perspectives that should be considered, but rather a starting point to take into account the main drivers for sustainability. Each perspective also operates at difference scales as shown by the three segments.

Figure 2: Stakeholder Perspectives at Different spatial Scales
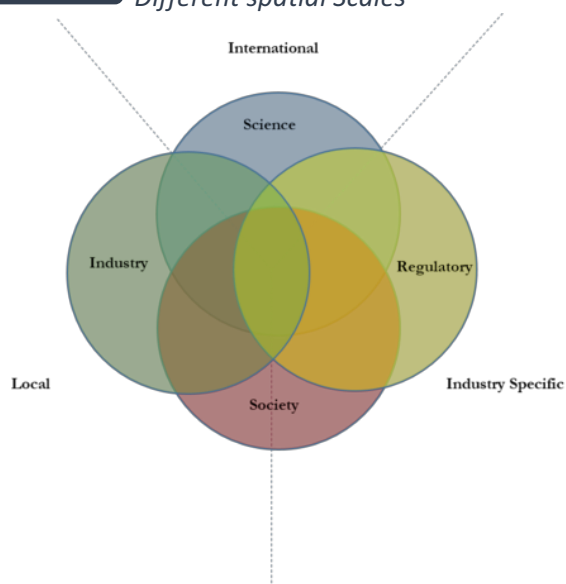
Coding Information Sources

The information sources are analysed for content that would suggest a high importance or risk is attributable to a particular issue. The frequency of such content, or the strength of the content within the information source can be used to infer significance. Coding must be tailored to the information source and may be based for example of frequency of chosen terms, quantity or quality of discussion about chosen topics, urgency indicated in the source etc. Coding is achieved in the prioritisation

process by classifying the information sources based on a simple high, medium, low ranking. Each of these rankings are then assigned a

numerical score; high = 3, medium = 2, and low = 1. Where a side by side comparison of different information sources is conducted, a fuzzy logic approach to determining an overall ranking can used as shown by in the adjacent table. This approach can be extended to account for any number of additional rankings that need to be summed.

Presentation of the results

After determining a ranking or score for the importance and risk presented by an issue, these results can then be plotted on a matrix as in the adjacent chart (Figure 3). Issues that appear in the top right quadrant are both high in saliency and present a high risk. These issues should therefore be the highest priority for the organisation to address. The obverse is true of issues that appear in the lower left quadrant.

Figure 3: Materiality Matrix of Sustainability Issues
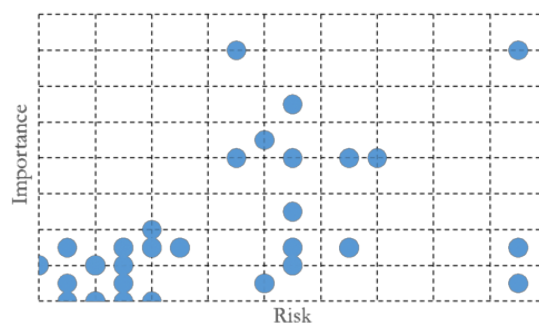
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Further Information

Journal Article: Whitehead, J. (2017). Prioritizing sustainability indicators: Using materiality analysis to guide sustainability assessment and strategy. Business Strategy and the Environment, 26(3), 399-412.

National Dashboard Project:
https://www.sustainablewellbeing.nz/nat-dash-report