Designing Our Tomorrow Business ↓

Setting objectives

Accept that all models have limits

Models are a simplified representation of real-world systems. The inherent complexity of the World means that in order to make them useful, models should be intentionally focused towards a specific purpose.

Any attempt to draw a diagram that represents flows of energy and materials must fundamentally accept that it is not possible to show everything. An important question is whether the model is correct enough to achieve its objective.

Drawing such a diagram inevitably requires making decisions regarding whether something should be shown at all, in brief, or in detail. This decision must be made with respect to achieving the objective of the model.

Set the objective

The objective of the model should match those of the business and the design project, see the section on Setting priorities for more detail.

For example, possible objectives of an impact map could be to look at the extent to which the flow of energy and materials impacts carbon, cost to the business, or handling of toxic materials.

Generally speaking, an impact map works best when it has a single objective, so modelling the 3 objectives above would typically require 3 different impact maps.

Configure the diagram to achieve the objective

Supposing that the objective was to understand carbon impacts, the diagram should be drawn to capture a detailed understanding of where the biggest carbon impacts are. Typical technology products consume significant amounts of energy in production of the printed circuit board and in use.

However, they are typically light and small to transport. Therefore, although the product typically travels from China to the UK shop through a complex distribution process, it is not necessary to represent this process in fine detail, it is more important to show the detail of other areas that have big impacts.

Challenge the system boundary

Drawing such a diagram also inevitably challenges the boundary of things that should be represented. If you set the boundary too wide, you will end up trying to model the whole world and fail. If you set the boundary too narrow, you will miss opportunities for radical improvement.

A pragmatic approach to setting the boundary is to make sure that you always represent the elements that are just outside of the boundary. In doing this you may realise these elements should be inside the boundary, in which case, expand the boundary one step further and repeat.

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