

Accelerating & Amplifying Change

TRANSFORMING CONSUMPTION & PRODUCTION
TOWARDS SUSTAINABILITY



Sustainable Consumption and Production Systems Thinking Pilot Practicum

SETTING BOUNDARIES: WHAT'S IN and WHAT's OUT:

We've all heard the adage, "everything is connected to everything else." However, to better understand the behaviors of complex systems, we often have to imagine an artificial boundary between the system in question and everything else.

Some boundaries are **temporal or time horizons** (e.g., we're going to look at energy consumption over a five year or ten year or 100 year time frame). Others are **geographic or spatial**, (e.g., we're interested in rising obesity rates in our community, or in our state, or nationally). Other boundaries exist as well. A politician may use party affiliation as a boundary, for example.

The key here is that you thoughtfully and explicitly pick a boundary that helps you gain the greatest insight into the behavior of interest.

Try this: Imagine you are on a task force seeking to understand why recycling rates have decreased in your community. How might you define the boundaries of the system that results in this situation?

Consider that setting too narrow a boundary might miss key information and setting too wide a boundary might cloud important elements of a story.

Also note that many of our stuck challenges have emerged because of short-term thinking, so consider selecting a longer time horizon. We also often overlooked impacts and potential solutions that lie beyond the boundary, so consider casting a wider net.

For example, you may gain some insight by looking at patterns in national recycling rates, but most likely, you'll want to focus primarily on the community-related variables driving the changes in recycling rates.

Flexible Boundaries

Setting boundaries can be liberating. The boundary you set is not permanent. It is simply meant to allow you to focus in on, explore and learn about your issue or opportunity through a particular lens for a period of time.

In the case of community recycling, you might start with a boundary focused primarily on the community. Once you've exhausted the within community influences, you can then look beyond the boundary to see what outside influences may be directly influencing community

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recycling rates. For instance, a state-wide recycling policy (if there was one), or perhaps national media. Try asking yourself and/or your working group: what does this system look like to someone or some entity outside the boundary?

Be Conscious and Explicit

Consciously choosing a boundary enables us to focus on the factors and interrelationships that most directly influence the behavior we're studying. Without the boundary, it's easy to be overwhelmed or miss the story we are most interested in.

Let's consider two types of boundaries: **spatial** and **temporal**.

We can define the "space" the system covers by selecting the set of parts that we think are most significant. Identify parts, interconnections, and causal loops all help define the spatial boundaries of the system.

To define the temporal aspect, we can create a "time horizon," the length of time over which a system's behavior unfolds. We can represent key behaviors or trends with a simple line graph. Setting time horizons, e.g., of 1 month, 1 year, or 10 years or more, counters the pressure to collapse time horizons and force our attention on snapshots or events, rather than patterns of behavior.

Questions to consider:

- What is the purpose of the system? What is the goal you want to achieve, or problem you have to solve?
- What is a reasonable boundary for the issue given the amount of time each cohort participant is spending during the practicum?
- What data would you gather to include in your analysis? What data might you leave "outside" the system?
- Finally, communicate, communicate, communicate - which people need to know what boundary you've chosen and why? And be open to changing the boundary if necessary.

Suggested reading: *Where do you draw the line?* <http://lindaboothsweeney.net/blog/?p=1127>
With some adaptation from *The Systems Thinking Playbook* and PBS Learning Media's systems literacy collection.