



A Model for developing a project Sustainability KnowledgeBase

A Whole Systems Sustainable Design Process - Templates & Workspace

- [4D Sustainable Design Model](#)

[Inner Systems](#), [External Connections](#), [Bright Green Spots](#), [Total Balance](#)

... applied as a Learning Cycle for developing responsive complex systems

- [4D Tips & Forum](#)

- [4D Templates](#)

- [4D WorkSpace](#)

Sustainable Design Resources

- [Whole system measures](#)

- [Whole system learning](#)

4D Method Intro

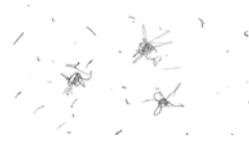
First... you shop around. beginning the process of fitting your project to your whole environment with filling your 'shopping cart' with goodies. It's a slow cooking recipe, though, so while the meal is being worked on you'll repeatedly go out shopping again, to take back some things and look for others... to get the ingredients just right for how you find you can use them.

Step 1. [Your Sustainability Shopping Cart](#)

Then begin finding your fit with your world, your generic 'problem in a box', and use the 'goodies' you've first selected for that. As you work on solving how you've first defined the problem you'll want your team to repeatedly go back out to explore its environment with their fresh ideas of how things should fit, to check, and discover new things, turning the 'box' of well defined things into a kind of a 'boat' for navigating relationships with independent things. Then another part is using rigorous 'whole system' measures. That's critical for seeing how a whole system fits with its world and to see what impacts to try to compensate for. A regular cycle of working on your design, questioning the problem, and exploring your place, teaches a way of engaging with your many independent partners in it, and unlearning the old habits of isolating and controlling them as interference.

Step 2. [A Cycle of Learning, Exploration and Discovery](#)

The long range goal is to create a finished project with connections to its world so the 'project in a box' becomes a 'boat' for navigating the world itself, continuing to discover and creatively adapt! A project actually becomes a kind of living thing, an independent system, and its learning processes are a spin-off from your design process. Who knows, maybe you'd label every brick 'go look around...!' and count that that message as one of the project's compensations for placing the heavy burden on the earth that any building actually does impose.



With Independent Systems... The Trick is that each one has a self-consistent internal design of its own, which develops along with it. They include people and other living things, but also ecologies and communities of all sorts, neighborhoods, families and interest groups, even industries and professions, and many other things that develop and decay along with an internal network. How they work presents a rather classic problem, what's inside all these self-consistent things is inconsistent with what's outside, and with each other. They're organizational 'islands'. It can be very hard to even see them, and especially hard to look inside them from the view of another. 'Rats' you might say, or maybe 'Ah ha!' Learning that you can't really understand them helps you learn how to get along. They're not 'independent in the sense of being disconnected, they're independent in how they use what's around them, and in how they fit. Oh yes, and, there's space in-between.

So that's a lot, and maybe one just finds a way to start.

- but the world is becoming more complex,... so we're all becoming complex system designers! Whether the subject of the learning process is a building, a city plan, a research idea, industrial transformation, or just your personal choices, the main challenges of our time in history are:

- new kinds of information and information analysis tools
- more key stakeholder communities to involve

4D Sustainable Design Process Template

...a Learning Cycle for designing & engaging with complex natural systems

- On each design cycle, use a simple but comprehensive

Exploration Within and Around Each Dimension

- pausing in the work, appropriately turning your attention in those 8 exploratory directions, recording and sharing with others what you find.



Inner Systems

- *Integrated Design Process*
- *Integrated Building Systems*
- *Getting the problem right*



Outer Connections

- Living Stakeholder Communities
 - Neighborhood - Professional Groups - Institutions - Nature
- *Programs & Methods*
 - LEED - GHG protocol - Supply Chain & Life Cycle Assessment



"Bright Green Spots"

- *Feature Elements - Promotion - Education - Collaboration*
- *Research & Experiment - Longshots, Compensations*
- *Where you can make a real difference in the larger picture*



Total Balance

- Narrative of whole system effects - both supply & distribution chains
- Measures for Before & After, Targets & Achievements
- Statement of Excesses and Compensations

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