

# Integrated Design Procedure

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**Integrated Design takes every relevant factor into account**, optimizes the connections between systems, and adapts the design closely to the context for best overall, life cycle performance—ecological, economical, and social. It recognizes and enriches relationships between all elements, with a design horizon that encompasses the project, the watershed, and the global cycles to which they are connected. It is to know the story of a place, and our role in that story. In short, Integrated Design is to—

*Do what makes sense in the context.*

## How?

- Assess context
- Get clarity on goals
- Inventory resources
- Define issues
- Creatively use resources to address issues
- Have fun doing it

## =Assess Context=

Develop and use design vision that is—  
**Wide angle**—Take every relevant factor into consideration, e.g., water supply, water security, elevation relationships, soils, sun, regulatory environment, culture, economics, climate and microclimate, fire, flood, earthquake, landslide, high winds, slope and solar exposure, neighbor relations, etc. etc.

**High resolution**—Zoom at will into relevant details such as microclimate, changes in soil perk through the profile, boundaries of subwatersheds, etc. etc.

**Accurate to scale**—Anchor where possible with hard data, fill in with good estimates. It is better to be roughly right than precisely wrong. Put numbers in understandable formats; An ordinary car doesn't use the energy of several cyclists, it uses the energy of about 700; a column 4 abreast and half a mile long.

**Rewindable**—What is the story of this place? Develop your ability to divine the past from it's tracks in the present. What's the geology doing? What is eroding, depositing? Where are the old landslides? What is the high water line? What plant community was here before? The languages spoken here?

**Fast forwardable**— What will this look like in 5, 30, 200 years? How will it fail? How can it be maintained? Who will do it? What is the ultimate disposition of the materials? Run a simulation in your mind on every single scenario you consider, checking against reality and refining your simulations as the system you went with ages over time.

**X-Ray vision**—To hidden qualities. What is happening underground? Inside the system? Picture it in your mind's eye. Books, classes, internet etc. are great, but your own experiences and senses are the best data stream. Vision is 10% data, 40% post-processing, 50% correlation with memory; can consciously practice and improve these brain visual processing firmware extensions to see hidden processes.

## =Get clarity on goals=

**Clarity on goals and context is key**— Who are the stakeholders? How will they change over time? What is the culture? How much are they willing to adjust behavior? Changes in goals and behavior have the greatest cost/benefit ratio and can have huge effects on the design. How much do they want to have to conserve? What is the Perfection standard? Hygiene standard? How much Idiot proof-ness, pampered-ness, system resiliency, Self-reliance, Educational or research value, Privacy, Legal precedent, policy change, Fire safety, Earthquake safety are desired? How concerned with debt load, liability, legal compliance, resale value, quality of life and spirit?

