Integrating social, financial, and legal systems into environmental design projects

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Overview

- Introduction to Invisible Structures

- Permaculture Ethics, Principles, and Domains

- Social Arrangements

- Legal

- Financial

- Example: PPCC's Sustainability Garden

- Workshop

Introduction to Invisible Structures

What are invisible structures?

- Definition
  - Invisible systems that support or degrade the process of designing institutions and cultures that are in harmony with nature and work toward the common good of society.

- Process
  - Deconstructing and reconstructing systems

- Strategy
  - Determine what the system was supposed to deliver
  - Design a better system
  - People should support the better system making the old system obsolete

(Taken and adapted from Bill Mollison)

Examples of Visible and Invisible Structures

Visible

- Water Systems
- Food Systems
- Built Environment
- Ecology

Invisible

- Ethics
- Social
- Legal
- Financial

Levels of Invisible Structures

Level One

- Standardized

- Smooth-functioning

- At least three mutual benefits

Levels of Invisible Structures

Level Two

- Beliefs
  - Spiritual
  - Worldviews
  - Closed vs Open

- Ethics and Values
  - Conservation
  - Community
  - Less fortunate

- Behaviors
  - Predispositions
  - Nurture
  - Unexamined Assumptions

Permaculture Ethics, Principles, and Domains

Permaculture Ethics

Earth Care

Fair Shares

People Care

Creatively Use & Respond to Change
(envision possibilities and
intervene in effective ways)

Use Edges; Value the Marginal
(important things happen
at the intersections)

Observe and Interact
(pay attention)

Use & Value Diversity
(diversity leads to
greater resilience)

Catch and Store Energy
(harvest while it's abundant)

Care for the Earth

Use Small, Slow Solutions
(local resources & responses,
manageable scale)

Obtain a Yield
(make sure you're
getting valuable results)

Integrate
(capitalize on how
things work together)

Self-Regulate; Accept Feedback
(be open to modify
dysfunctional behaviours)

Fair Share   Care for People

Design from Pattern to Detail
(observe natural/social patterns
and apply them to design)

Use & Value Renewables
(reduce dependency
on scarce resources)

Produce No Waste

Permaculture Flower

The permaculture journey begins with the Ethics and Design Principles and moves through the key domains required to create a sustainable culture. The spiral evolutionary path joins together these domains, initially at a personal and local level, and then proceeding to the collective and global level.

Some of the specific fields, design systems and solutions that have been associated with the wider view of permaculture are listed below.

Land & Nature Stewardship

Bio-intensive gardening
Forest gardening
Seed saving
Organic agriculture
Biodynamics
Natural Farming
Keyline water harvesting

Holistic Rangeland Management
Natural Sequence Farming
Agroforestry
Nature-based forestry
Integrated aquaculture
Wild harvesting & hunting
Gleaning

Building

Passive solar design
Natural construction materials
Water harvesting & Waste Reuse
Biotechture

Earth sheltered construction
Natural disaster resistant construction
Owner building
Pattern Language

Tools & Technology

Reuse & creative recycling
Hand Tools
Bicycles and electric bikes
Efficient & low pollution wood stoves
Fuels from organic wastes
Wood Gasification

Bio-char from forest wastes
Co-generation
Micro-hydro & small scale wind
Grid-tied renewable power generation
Energy storage
Transition engineering

Education & Culture

Home Schooling
Waldorf education
Participatory arts and music

Social ecology
Action Research
Transition culture

Health & Spiritual Well-Being

Home birth & Breast feeding
Complementary & Wholistic Medicine
Yoga, Tai Chi & other
body/mind/spirit disciplines

Spirit of place, indigenous
cultural revival
Dying with dignity

Finances & Economics

Local and regional currencies
Carpooling, Ride sharing & Car share
Ethical Investment & Fair Trade
Farmers markets & Community
Supported Agriculture (CSA)

WWOOFing & similar networks
Tradable Energy Quotas
Life Cycle Analysis & Emergy
Accounting

Land Tenure & Community Governance

Cooperatives & Body Corporates
Cohousing & Ecovillages
Native Title and traditional use rights
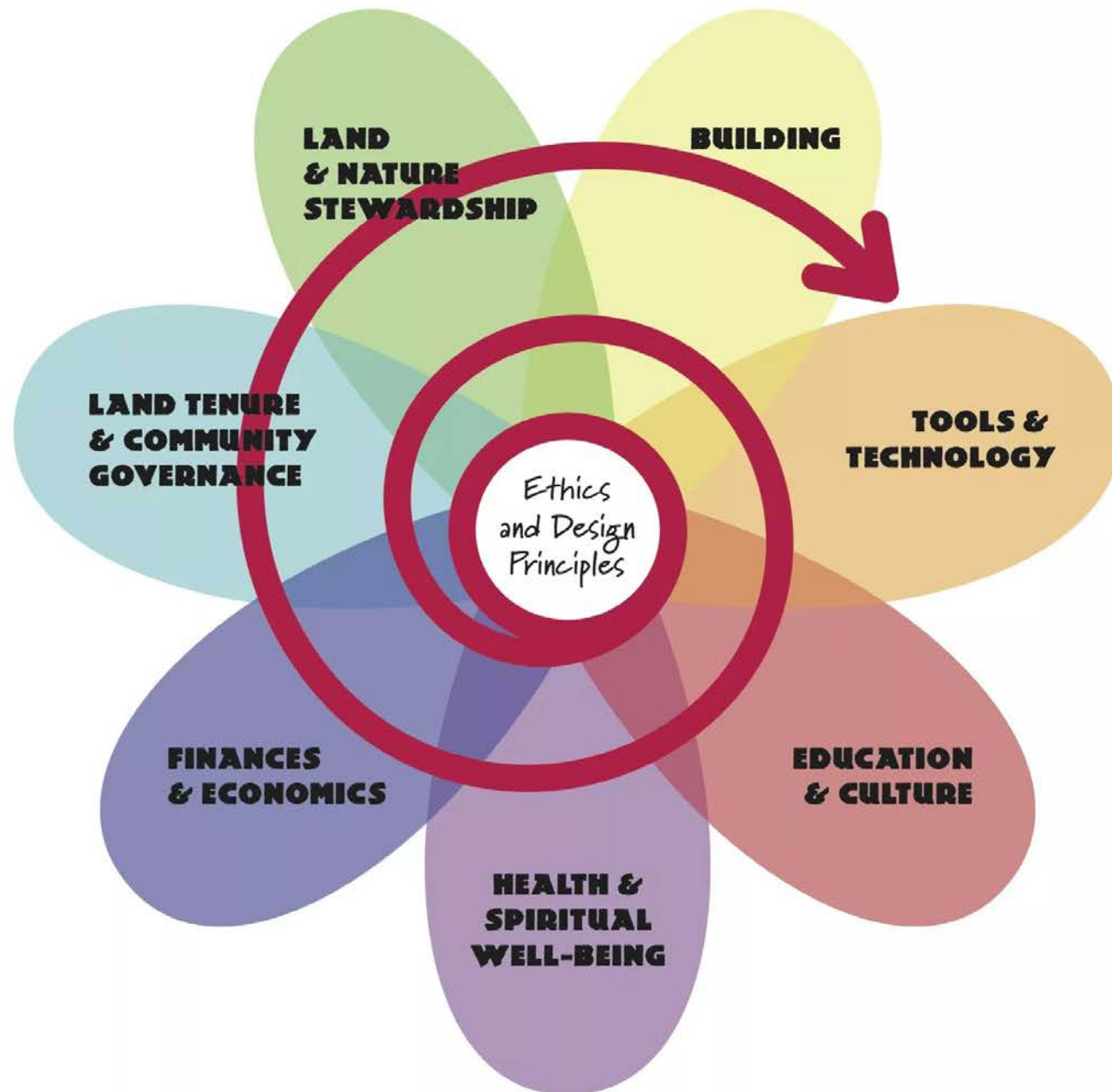
Open Space Technology &
Consensus Decision Making

Social Arrangements

Who Owns the Project?

- Who do you need to get permission from?

- Who is going to be on the design team?

- Who is going to maintain the design?

- Who is going to be influenced by the design?

How are decisions made?

- Consensus

- Formal Hierarchy

- Informal Hierarchy

- Committee

- Voting

- Challenges to effective decision making
  - Not enough information
  - Too much information
    - See the tree through the forest
  - Too many people
  - Vested interests
  - No emotional attachment

Source: Skills You Need

Legal

Who has the rules?

- Global

- Federal

- State

- County

- City

- Institutional

- Stakeholders

➢ How do they align or contradict each other?

➢ How do they impact your project?

➢ How can they be improved?

What are the rules?

- Non-profit
- Business
- Buildings
- Cities and Counties
- State
- Federal
- International

- Why are they in place?
- How do they influence your project?

Financial

What are the costs of your project?

- Labor
- Materials
- Maintenance
- Improvements
- Expansion

➢ What are the short and long-term costs?

➢ Assign a value to the intangible benefits.

➢ What is the Return on Investment (ROI)?

What funding mechanisms are available?

- Donations
  - Money
  - In-kind

- Grants
  - Federal
  - State
  - County
  - Foundation

- Private
  - Homeowner
  - Investors

- Revolving Fund

- How much is available?

- What are the terms?

- What are the trade-offs?

Example: PPCC's Sustainability Garden

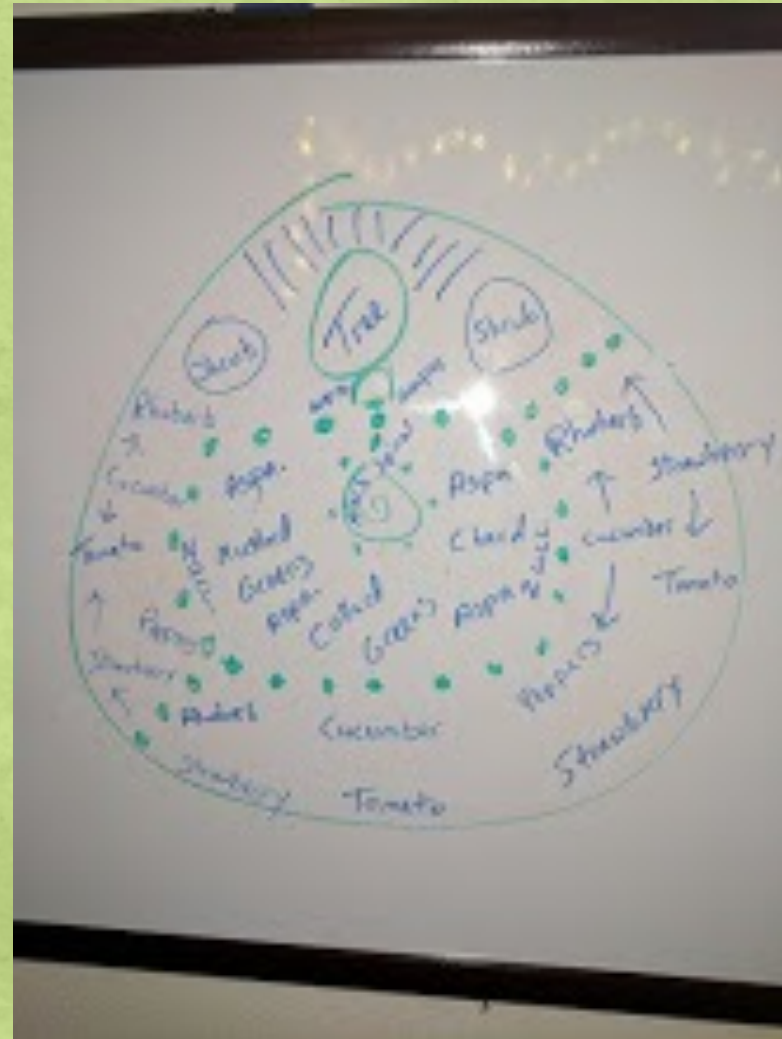# Interview Stakeholders

- Ethics and Principles
  - Earth Care
  - People Care
  - Fair Share

- Social Arrangement
  - Who owns the project?
  - How are decisions made?

- Legal
  - Who has the rules?
  - What are the rules?
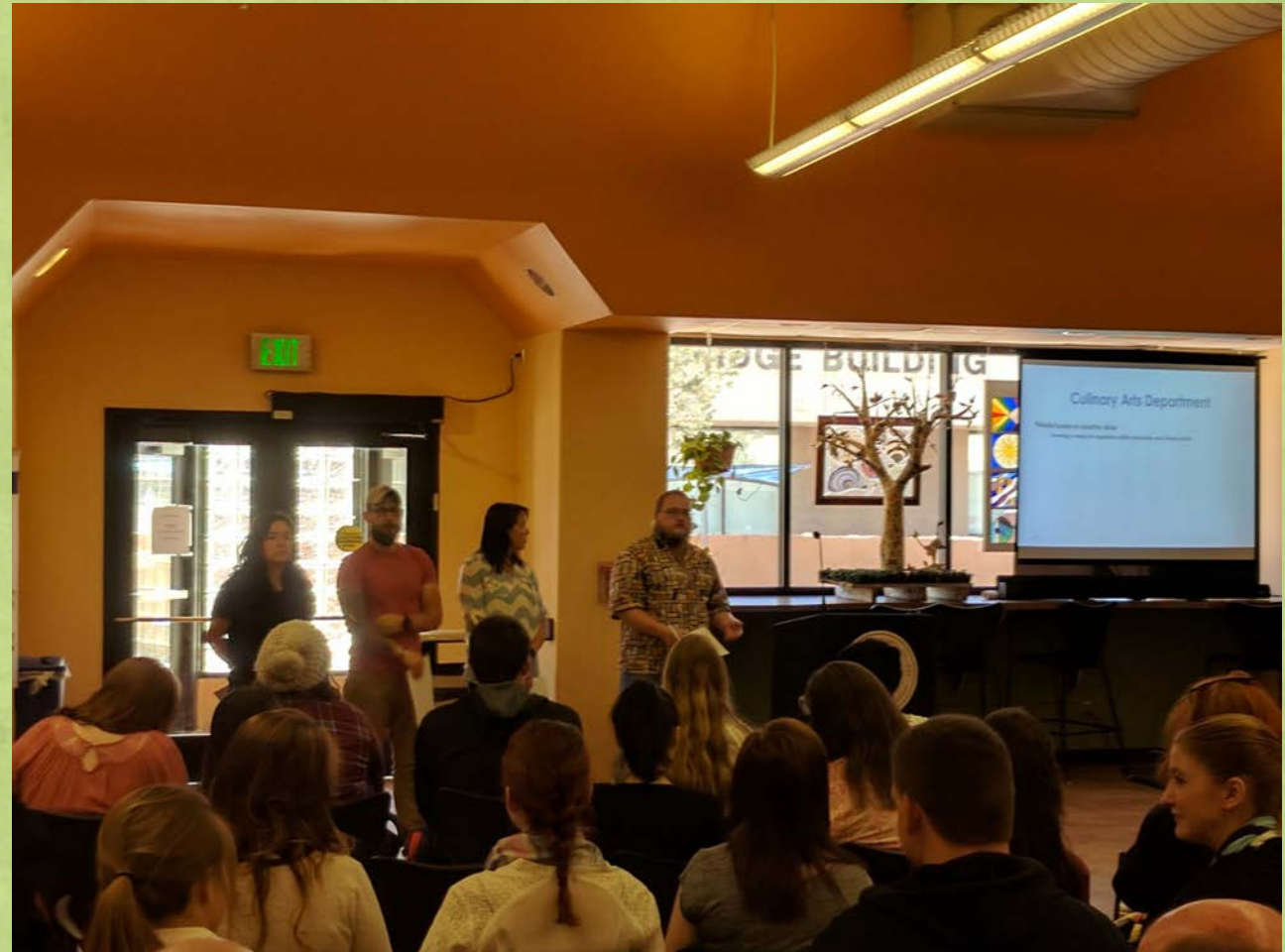
Organize and Teach Design Teams

Incorporate and Improve Designs

Implement Designs

- Financial
  - Who owns the project?
  - How are decisions made?

Final Design

- Future Expansion

Team Activity

Team Activity

Quickly brainstorm how these invisible structures relate to your designs.

- Permaculture Ethics, Principles, and Domains

- Social Arrangements

- Legal

- Financial

Questions?