



# How to Develop and Operate a Successful Green Building Program



FRONTIER ASSOCIATES LLC



# Part 1: Planning for Start Up

Part 2: Strategies

Part 3: Lessons Learned

Part 4: The Future

# What Does a Green Building Program Look Like?

**That depends on:**

- Who is the sponsor**
- Who are the primary partners**
- What are the needs**
- What are the local conditions**

# Sponsors

## Government

- **Cities - San Jose**
- **Counties - Hennepin**
- **States - New York**
- **Federal Agencies - D.O.D.**

## Utilities

- **Investor owned - Portland**
- **Municipal - Austin**

## Not For Profit

- **Southface**
- **H.B.A.s**
- **Green Building Alliance**

# Primary Partners

- **Design and Construction Industry**
- **Utilities**
- **Government Agencies**
- **Affordable Housing Providers**
- **Environmental Groups**

# Primary Partners

## Utilities

- Energy
- Water and wastewater

## Affordable Housing

- Government
- NGO

## Construction Industry

- Design community
- Builders and contractors
- Real estate and development community

## Government Agencies

- Cities, counties, etc.
- Air quality agencies
- Solid waste

## Environmental Groups



# Who Needs What?

## Building Owners, Buyers, Renters

- Lower operating costs
- Healthy, productive, indoor environment
- Green seal of approval
- Owner's representative
- Higher quality product, increased value
- Reduced legal exposure

planning and evaluation

# Who Needs What?



## Construction Industry

- Competitive marketing edge
- Unique educational opportunity
- Higher quality product, increased value
- Positive relationship with government
- Reduced legal exposure
- Improved image

planning and evaluation

# Who Needs What?

## Utilities / Energy

- Peak load reduction
- Emissions reduction
- Reduced uncollectables
- Recognition as environmental stewards
- Utility restructuring requirements

**planning and evaluation**

# Who Needs What?

## Utilities / Water & Wastewater

- Reduced consumption
- Reduced / better quality run off
- Enhanced water quality
- Lower energy use for processing / pumping



planning and evaluation

# Who Needs What?

## Government / Solid Waste

- Use of recycled / recyclables
- Reduction of waste going into landfills
- Customer satisfaction



planning and evaluation

# Who Needs What?

## Government / Air Quality

- Power plant emissions
- Reduced trip-miles per day
- Reduced V.O.C.s (Volatile Organic Compounds)



planning and evaluation

# Who Needs What?

## Government / Community

- Public Health & Safety
- Environmental Compliance
- Economic Development
- Promotes interdepartmental cooperation
- Positive relationship with building industry
- Citizen Satisfaction
- Improved reputation
- Community Vitality

**planning and evaluation**

# Who Needs What?

## Affordable Housing Agencies

- Housing that is truly affordable
- Durable communities
- Environmental equity

## Environmental Groups

- All of the above
- Collaboration / finding common ground with business groups

**planning and evaluation**

# Local Conditions

## Climate

- Not at this stage of planning but most important in technical specifications

## Level of Sophistication

- Public
- Industry

**how aggressive can you be?**

# Local Conditions

## Level of Support

- Government
- Construction industry
- Business community
- Utilities
- Environmental groups

Public Knowledge and Acceptance  
of “Green”

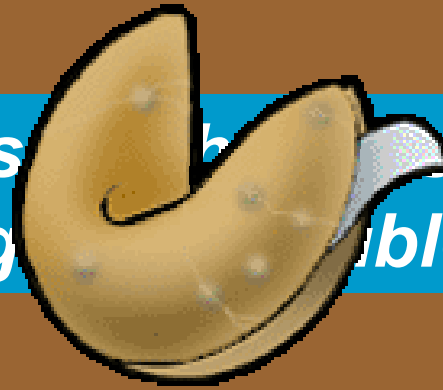
how aggressive can you be?

# Summary: Planning for Start Up

- **Know your sponsor(s) and primary partners**
- **Determine what is valuable to each**
- **Determine whose needs you can meet**
- **Develop goals based on needs that can be met**
- **Develop EM&V protocol**
- **Develop strategies for meeting goals**

# Part 2: Strategies

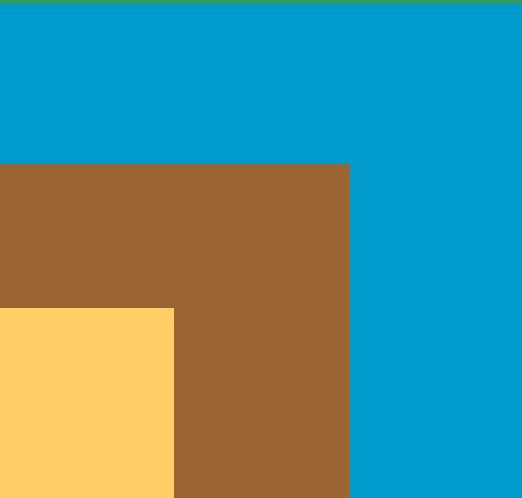
*The path is not straight for a shopper.  
It zigs and zags as they move back.*



# Strategies for Meeting YOUR Goals

**Ideal and Practical  
Desirable and Doable**

**What are the steps to your long-range goals?**



# Establish Two Teams Involving All Relevant Stakeholders

## Team 1: Development Team

A small group which will make a plan & be the core implementers of the program

## Team 2: Advisory Team

A larger group which will respond to the plan and be its marketplace supporters

# Potential Stakeholders

- Developers
- Architects, Designers
- Engineers
- Builders, GC's
- Project Managers
- HVAC Contractors
- Trade Contractors
- Product Suppliers
- Realtors, Marketers
- Appraisers, Lenders
- Home Owners and Renters
- Building Owners
- Building Managers
- Building Tenants
- HBA Representatives
- Government Reps
- Utility Reps
- Environmental Groups
- And probably some others

# Create Your Plans

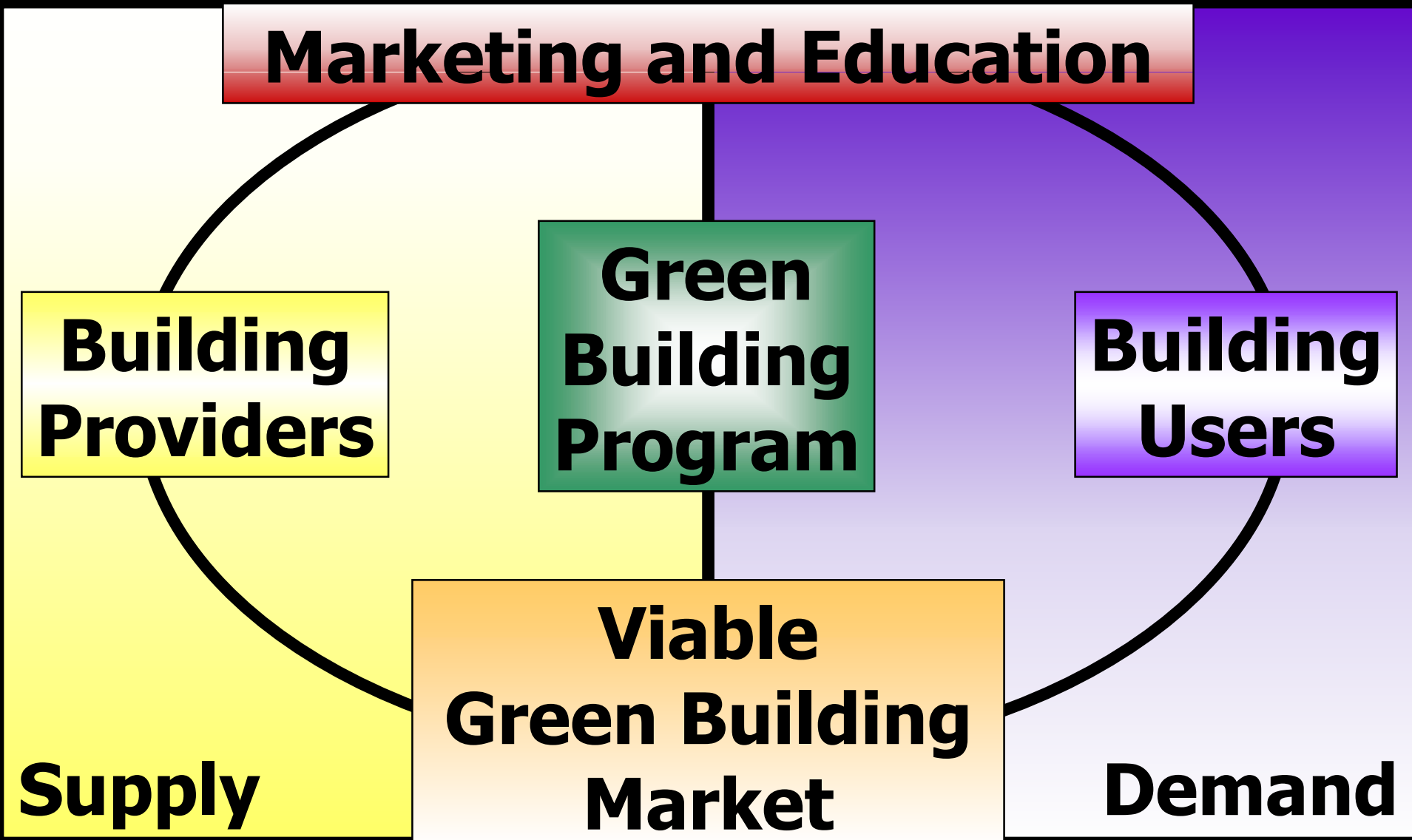
## Conceptual plan (first)

- Consider what your program could look like and all of the marketing and education strategies that could meet your goals

## Implementation plan (second)

- Select the strategies that are practical for you and detail how they will be implemented

# The Plan



# The Reality

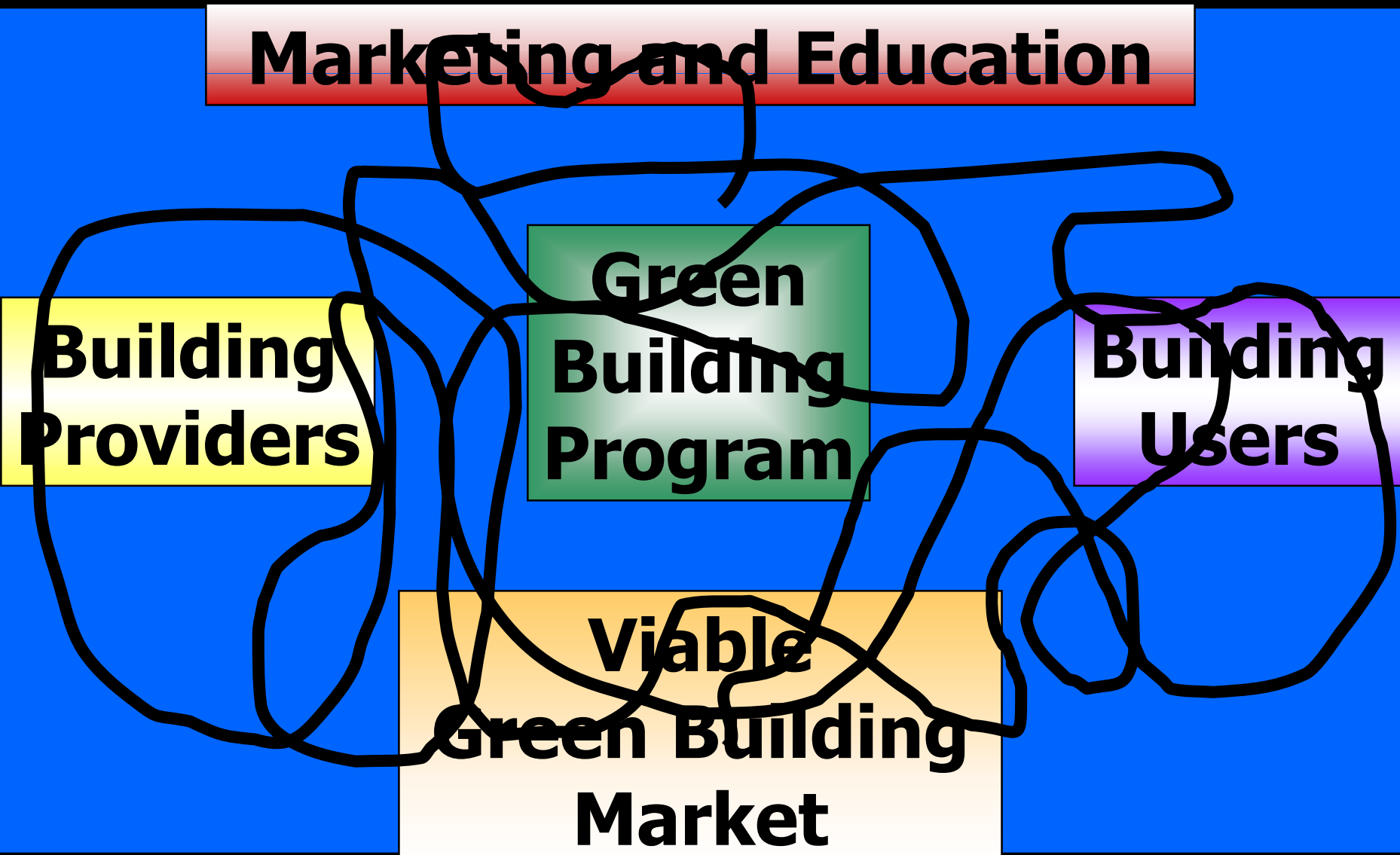
**Marketing and Education**

**Building  
Providers**

**Green  
Building  
Program**

**Building  
Users**

**Viable  
Green Building  
Market**



# It's All Marketing and Education

## Getting across the know-how

- so green services/products can be created

**Supply Side**

## Getting across the benefits

- so building professionals will want to provide it and consumers will insist on having it

**Demand Side**

# Marketing and Education

- **Who is your target audience?**
- **What do you want to get across?**
- **What tools will do this best?**
- **How can you evaluate your efforts to know what changes you need to make?**

# Conceptual Plan Issues

What construction sectors are your concern?

- Residential
- Commercial
- Municipal



# Residential Specializations

## Sector

- Single family
- Multi-family
- “Affordable”
- Manufactured
- Development

## Product

- New construction
- Remodeling
- Production builders
- Small volume
- Custom
- Speculative
- Historic

# Commercial Specializations

- Development
- Low-rise
- High-rise
- Industrial
- Retail
- Office
- Institutional
- New construction
- Remodeling
- Historic preservation
- Interiors
- Owner occupied
- Speculative:  
sold or leased
- Deconstruction

# Can You Use Regulatory Tools?

## Sticks:

- Resolutions and ordinances
- Zoning & land development codes
- Local building code amendments
- Requirements for building permits

## Carrots:

- Reduced development fees
- Expedited permitting process
- Tax breaks

# Can You Use Incentives?

- **Grants, rebates, bonuses**
- **Special financing**
- **Co-marketing, referrals, tours**
- **Technical consultation**
- **Discounted services, training, events, resources, books**
- **Awards, recognition**

# What Classroom and Field Training Can You Offer/Co-offer?

- **Seminars & trainings (CEUs)**
- **Presentations**
- **Demonstration center**
- **Charrettes**
- **Conferences**
- **College courses**

# What Special Events Can You Offer, Co-offer, Participate In?

- Demonstration projects
- Building tours
- Fairs
- Trade shows



# What Building Services?

- **Design and specification assistance**
- **Energy modeling**
- **Rating system and certification**
- **LEED assistance**
- **Testing/commissioning**
- **Development approval assistance**
- **Marketing assistance, and partnering**
- **Membership**

# What Educational Materials?

**Print, web-based, CD's**

- Guidelines, manuals**
- Resource lists**
- Fact sheets**
- Case studies**
- References**

# What Other Marketing Tools?

- Program name & affiliation
- Logo
- Brochures & other print materials
- Certificates, plaques
- Yard/building signs
- Advertisements
- Billboards
- CEU's
- Awards, recognition

# Evaluation Methods

**How will you know if your program is meeting it's goals? Must be part of plan.**

- **Analysis of all green improvements over standard (energy, water, materials, etc.)**
- **Tracking participation and marketing outreach (ratings, members, contact hits)**
- **Effects (codes, changes in industry practices, new economic development)**

# Evaluation Methods

## Some possibilities:

- **Tracking participation**
  - Membership / customers
  - Construction affected
  - Education and outreach
- **Customer perceptions**
  - Surveys, focus groups

# Evaluation Methods

- **Projections**
  - Comparing green-designed and specified building to code through modeling
- **Effects**
  - Side-by-side comparisons
  - Testing and monitoring
  - Utility bills

# Evaluating the Effects

- **Everyone likes hard numbers**
- **Program credibility**
- **Basis for deciding what's worth the time, trouble and money**
- **What are you able to evaluate?**
- **Utilities can track utility bills**
- **Builders can track costs of measures, increases in sales volume/price/activity, reduced callbacks**

# Evaluating the Effects

## Easier Stuff

- Electricity, gas and water use
- Outdoor air pollution avoided
- Material use/costs reduced
- Waste reduced

## Harder Stuff

- Health improved and medical costs reduced
- Productivity improved
- Comfort
- Improved marketability

# Implementation Plan

*Can't do everything, so...*

What program elements will you select, given your assets and lacks?

How will they be accomplished?

- By whom?
- For what budget?
- When?

**It takes a few rounds of considering everything we've discussed before you can make these choices.**

# What is Most Urgent?

## Address supply side first!

- **Get the message out to building professionals**
  - Line up your partners and start-up funding.
  - Develop green building education program for professionals.
  - Create Guide Book, brochures and web site. Decide on the green building message appropriate for your location.

# What Can Wait a Bit?

## Address demand side second

- **Get your message out to building buyers, users, marketers**
  - **Develop education programs about what GB is, why it is of value, and where / how to get it**

# What Else Can Wait?

**A full fledged rating and certification system**

**Caution:  
a rating system  
is not a program  
—it's a M&E tool.**

# What Is Success?

To truly succeed, you will zig and zag between supply and demand

- Add more services gradually as partners, money, personnel, and market maturation allow
  - Maybe a rating system now, maybe not

# What About The Rating System?

- Are there already rating systems available in your market?
- Would your own rating system further your goals better?
- Can you effectively combine systems?
- Will you have the personnel to operate one?

# Your Own Rating System

## Some things to consider:

- Participants
- Prescriptive, performance or combination
- Requirements, choices, breadth
- Standards, flexibility
- Tiered or single level

# More Things to Consider

## Basic organization

- By Construction process chronology
- By Topic

## Content

- Meaning of green
- Categories and specifics

## How much to include?

- Quantity
- Complexity
- Adaptability

# Some Category Possibilities

- **Development**
- **Site**
- **Energy**
- **Water**
- **Materials**
- **Systems**
- **Testing, commissioning**
- **Health & safety**
- **Construction waste**
- **Community**

# Categories

What categories you choose is mainly a function of:

- Building sector
- **Scope of attention**

How you break them up is mainly a function of:

- Who your participants are
- What you want to stress

# Content Issues

- **Easy-to-quantify**
- **Standards**
- **Gradations**
- **Conflicting values**
- **Fuel specific or neutral**
- **Other programs**
- **Location-specific appropriateness**
- **Availability, doability**
- **Controversial, political**
- **Alternative, far-out**
- **Negative/positive**
- **Point values**

# Verification

- **What will be inspected?**
- **What will be tested?**
- **All buildings or some?**
- **By whom?**
- **When? How many times?**
- **What if inspections or tests fail?**

# Training Considerations

- **One or specialized version for building professional sectors**
- **Content**
- **Amount of time**
- **Classroom / field**
- **Instructors**
- **Teaching materials**
- **Certification of attendee**

# Overall Qualities

- **Easy to understand**
- **Flexible**
- **Easy to submit**
- **Fair and easily managed inspection process**
- **Reasonable time frame for all parts of process**

# In Practice

- **Review by Advisory Group**
- **Trial run by actual practitioners**

# Summary: Strategies

## Put together two teams

### – Development

- Small
- Sponsors and primary partners
- The people who will do the heavy lifting

### – Advisory

- Representatives from all stakeholders
- Review and provide input
- Provide credibility from many sectors

# Summary: Strategies

## Conceptual Plan

- Everything you could possibly do
- Everyone who could possibly help
- Use it to get buy in and commitment of funding

## Implementation Plan

- What you determine you can really do
- Who is going to do what
- Timeline, costs and benefits

# Part 3: Lessons Learned



# Challenges for GB Programs

Lack of education in the industry

Tradition of linear communication rather than integrated

Selling a concept/vision rather than a product: **it is not a one-time sale but a change in the way people do things and the building a relationship with your program**

Often subject to changes in politics, funding, economics and organization

# Planning & Operations

Make a detailed, long-range plan:  
**you need a roadmap for yourself and to communicate to others**

Be clear and realistic about your desires, needs, goals, and their purpose

Target your activities and make them doable, specific, and time-framed: **otherwise you have less chance of success, and will lose motivation**

# Planning & Operations

Develop supply and demand sides: engage all sides of the industry and connect the dots for them - you are making communication and transactions possible

Don't reinvent the wheel (and don't copy inappropriately), but do localize

# Planning & Operations

Get/maintain commitment from leadership

Analyze obstacles, prepare, be flexible: **know your market, prepare for its opportunities and hurdles, and have easy to adopt alternative action plans**

# Planning & Operations

Get/keep moving (be impatient, yet patient): **must be aggressive, but understand that many changes take time**

Learn, keep good records of everything, keep improving, get feedback and surveys: **without record keeping you don't know where you have been, where you are, where you want to go, or when you get there**

# Planning & Operations

Get sustainable funding

The only measure of success is the transactions that happen at the end of the day: **brochures do not a program make**

# People & Partnerships

Get the best, passionate staff you can:  
**respect, praise, and challenge them**

Get credible, flexible people: **those who can talk to and work with anyone, and can sell your concept in any way required**

Get a top-down directive: **it always beats a bottom-up effort**

# People & Partnerships

**Make many partnerships: but have a workable number of players**

**Target people's goals: what you are offering is in support of their strategic plan and is not a diversion from their primary business - don't ask them for help, but show how you can help them**

# People & Partnerships

Use your natural allies: **who share the end result of more green buildings**

Recruit leaders in the field

Find and develop champions who have the passion and the time: **get senior, mid, junior and backup people**

# Growing a Green Building Program

User friendly, easy entry,  
multi-level: people want to be able  
to participate and then compete on  
levels

Adapt to your marketplace

Be positive and get buy-in: don't  
scare, berate or shame people into  
being green

# Growing a Green Building Program

Make sure to “train the trainer” and mainstream every step of the process: you need lots of others to make this happen

Learn, adapt and gradually raise the bar: listen, monitor, and make changes as your program and market matures

# Marketing Your Program

Be extensive and visible: **do as much co-marketing, getting press, and free advertising that you can**

Be simple, clear, and direct in your message: **get their attention, state the problem, tell them what do do about**

Don't assume that people have the same belief system as you: **stress what the customer wants, not what you want**

# Marketing Your Program

Sell the “benefits” not the “features”: a product does not impress someone, but what it delivers does

Sell all the benefits: IAQ, comfort, health, productivity, smooth process, market advantage

# Pitfalls

Taking on too much or too little

Avoiding a fee for service system:  
**if it is free, people give it no value**

Having no authority or power: **can  
impede actions**

# Pitfalls

**Too little record-keeping: weakens our arguments and loses valuable time**

**Lack of analysis of non-energy aspects: non-energy aspects are often the most compelling reasons to go green - documentation makes them stronger**

# Pitfalls

Falling into the “payback black hole”:  
**depending on payback for everything will negate the opportunity to sell almost everything, because the numbers are still very subjective or non-existent**

Making the “features sale”: **your buyer does not understand features**

# Pitfalls

Depending on singular champions:  
**they may change jobs, duties, lose interest, move or be promoted**

Losing perspective: becoming overly enamored

Pushing too hard, too much,  
too soon: **realize that greening a business is an incremental process.**

# Pitfalls

**Not having humility: it is not a function of “I have the answers” but “I have suggestions that can help you do better business” - there is no right or wrong; green is not a cult, it is a business.**

# Toughest Obstacles to Tackle

Inertia, fear, conscious ignorance (of change)

**Solution: introduce concepts slowly and framed so that the listener understands/ listens and finds it appealing**

Ecologic distance

(to understanding cause/effect)

**Solution: teach the causes/effects of construction**

# Toughest Obstacles to Tackle

Economic and ecological valuation /  
rights (to logic)

**Solution: discuss the concept of  
“the commons” and the value of  
clean  
air / water / land, biodiversity, green  
space**

# Toughest Obstacles to Tackle

Lack of good scientific research  
(to advancement)

**Solution: encourage all partners to document, analyze, research, and survey, while relying on common sense**

Planning (to density, community design)

**Solution: keep talking to land/community developers and planners. Do not limit yourself to architects/builders**

# Toughest Obstacles to Tackle

Mobility (to long-term investment)

Solution: sell present and resale value, quality, comfort, durability

Fashion (to logic)

Solution: make Green Building fashionable

# Toughest Obstacles to Tackle

Generification (to regional appropriate-ness and the willingness to be different)

**Solution: support the concept of having a unique home or building which meets the needs of the occupants**

Affluenza (to size and materials sourcing)

**Solution: avoid the “too big house” argument because it is judgmental and doesn’t change behavior - it only alienates; advocate the concept of “more,” not “less”**

# Summary: Lessons Learned

Start where you are: a small step, well done, will lead to incrementally more steps

Keep your eyes on the big picture: green building can't be accomplished by band-aids (adding this or that green product or measure)

# Summary: Lessons Learned

*“Sustainable design is not a reworking of conventional approaches and technologies, but a fundamental change in thinking and ways of operating—you can’t put spots on an elephant and call it a cheetah.”*

*Carol Franklin, Andropogen*

# Summary: Lessons Learned

Be inspired every day: we are lucky to be involved in this exciting, important work which affects everything - look back to see how far we've come

# Part 4: The Future



# GREEN BUILDING



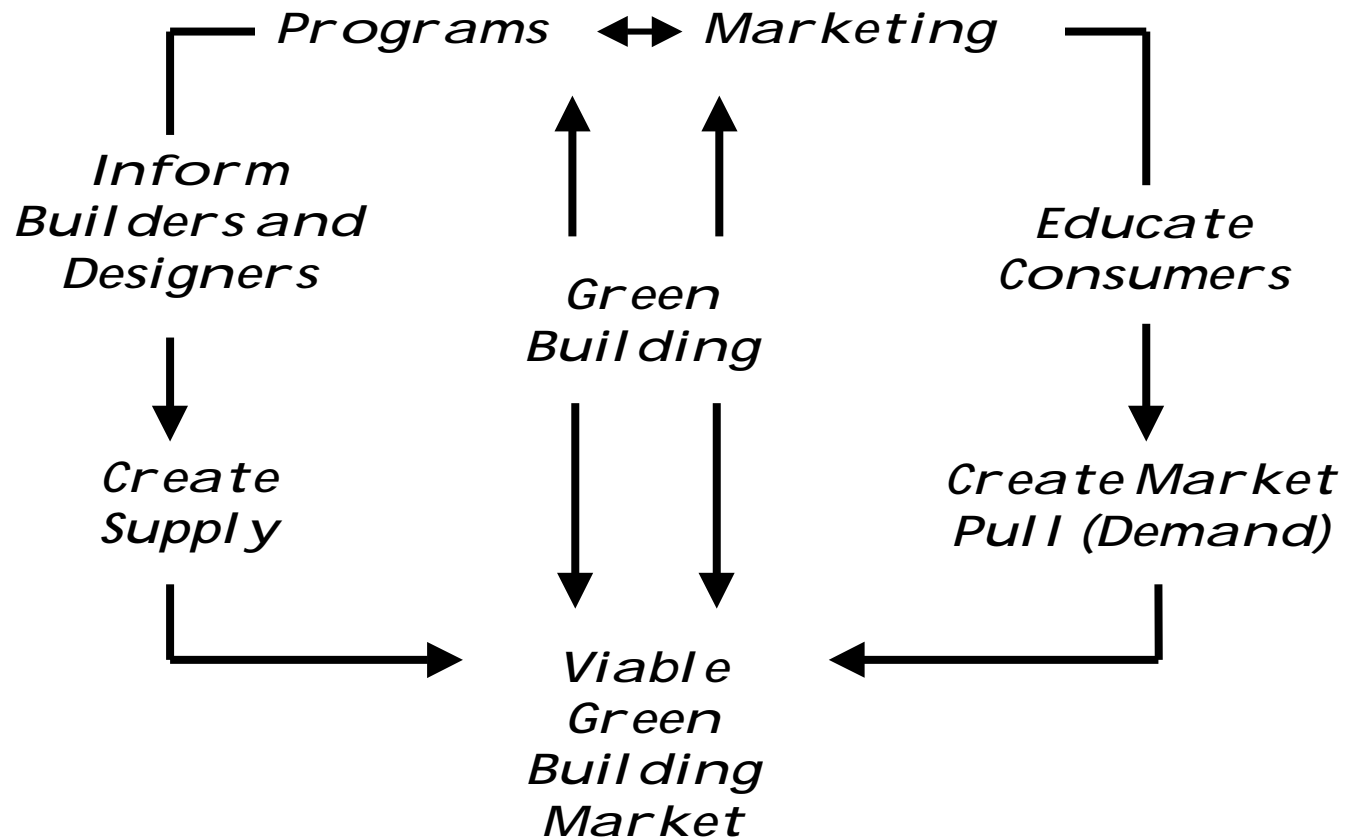
Santa Monica Green Building Program  
Conserve today, preserve tomorrow



# Growth in Green Building

- GBPs: 0 in 1990, 20+ in 2002
- USGBC: <500 in 2000, >2000 in 2002
- Many federal agencies, states, cities that require LEED
- LEED has registered >450 projects & >70 M square feet in 2002
- 2002 - Austin Green Building Program rated 57% of Austin homes

# Is the Market Transformed?



# Signs of Transformation

Higher level of marketing and education

Organized, active “clearinghouse” and partners

Government programs/ policies/ codes facilitating GB

# Signs of Transformation

Educated professionals and aware buyers

True implementation among the professionals and deliberate purchases among the buyers

# Signs of Transformation

## Advanced evaluation and continuous improvement

- Carbon tracking, emissions trading
- VOC/ozone, etc. measurement
- Life cycle assessment - embodied energy
- Health effects
- Environmental cause/effect relationships

# Signs of Transformation

Focus on other segments of the market: residential, commercial, municipal, affordable, development

Use of advanced technologies in that market: zero-net energy buildings, renewables, fuel cells, co-generation, living machines, water recycling/ collection, daylighting

# Mature GBPs are Focused On...

- Effective compliance with or use of LEED and other rating systems
- Basic and deeper training for professionals
- How to handle remodeling and operations
- Affordable housing, multi-family ratings
- Homeowner education classes
- Improving web site information
- Developing sustainable funding (now fewer federal and private grants)

# New Green Building Programs

- Who are we and what motivates us?
- What are our goals?
- How do we want to address the green building issue?
- How large do we want to define green building?
- How will we fund it?
- What tools do we want to use?
- What measurements do we want to use?

# In Closing

It all comes down to what you value and what you want to learn about, understand, accept, and then act on.

- Environment
- Money (productivity, efficiency, profit)
- Customers
- People
- History, legacy, ethics

# In Closing

Can make an economic or ethical argument/debate for everything: but connections can get removed farther than you are comfortable in accepting responsibility for.

This is our business: we have been given the right to conduct it. What is our responsibility? What is your sphere of influence? What kind of a society do you want to live in?

# Discussion...

What are your issues  
in starting green  
building programs?



# For more information, contact

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