



# An Introduction to the U.S. Green Building Council and the LEED™ Green Building Rating System

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Presented by Nadav Malin, BuildingGreen, Inc.

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## U.S. Green Building Council

- National nonprofit organization based in Washington, DC
- Diverse membership of organizations
- Consensus-driven
- Committee-based product development
- Developer and administrator of the LEED™ Green Building Rating System



## Leadership in Energy & Environmental Design

A leading-edge system for designing,  
constructing, operating and certifying the  
world's greenest buildings.



## Why Was LEED™ Created?

- Facilitate positive results for the environment, occupant health and financial return
- Define “green” by providing a standard for measurement
- Prevent “greenwashing” (false or exaggerated claims)
- Promote whole-building, integrated design processes



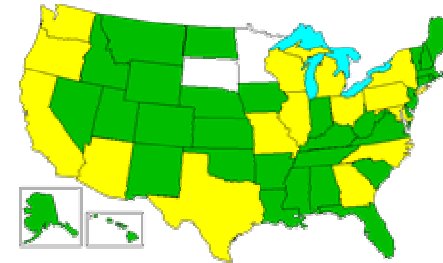
## Why Was LEED™ Created?

- Use as a design guideline
- Recognize leaders
- Stimulate green competition
- Establish market value with recognizable national “brand”
- Raise consumer awareness
- Transform the marketplace!



## LEED™ Market Transformation

- 53 Certified Projects\*
- 820 Registered Projects\*



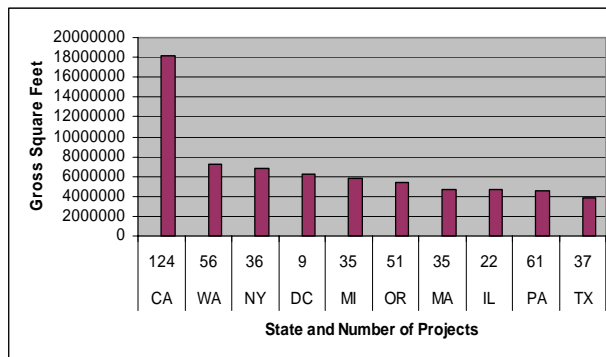
115 M gsf\*      48 States      7 Countries\*

\*As of 05.09.03



## LEED™ Market Transformation

- Registered Projects by State\* - Top 10

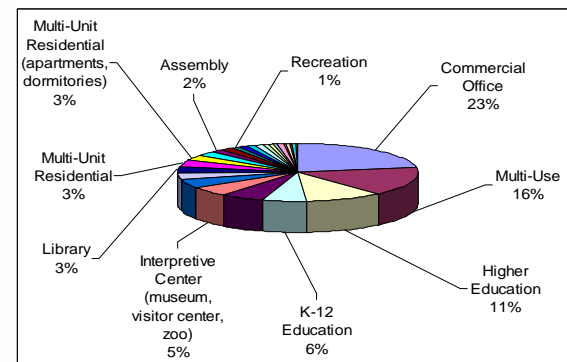


\*As of 05.09.03



## LEED™ Market Transformation

- Registered Projects by Building Type\*

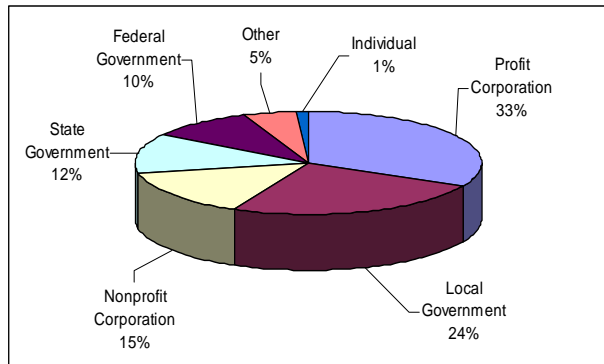


\*As of 05.09.03



## LEED™ National Reports

### Registered Projects by Owner Type\*



\*As of 05.09.03



## LEED™ in the USA

### Federal Government Use:

- **General Services Administration (GSA)**
  - LEED Certified projects beginning in 2003
- **U.S. Air Force**
  - LEED Application Guide for Lodging
- **U.S. Army Corps of Engineers**
  - Adoption of LEED™ (SPiRiT)
- **Department of State**
- **Department of Energy (DOE)**
- **Environmental Protection Agency (EPA)**
  - Grant for LEED Existing Buildings
- **U.S. Navy**
  - Grant for LEED Residential



## LEED™ in the USA

### State Government Use:

- California
- Maryland
- Massachusetts
- New Jersey
- New York
- Oregon
- Pennsylvania



New York State Department of Environmental Conservation  
Office Complex at 626 Broadway Avenue  
Albany, New York



Owner	Trade Company
Project Team:	Architect: Skidmore, OWINGS & Merrill LLP Engineer: Skidmore, OWINGS & Merrill LLP Contractor: Skidmore, OWINGS & Merrill LLP
Building Details:	Building Size: 400,000 sq ft Year: 2004 Type: Office Construction Type: Steel Frame Use: Office Floor Area: 400,000 sq ft Energy Use Intensity: 1.1 Btu/ft²-hr Commissioned: 2004

**LEED** Version 2.0 Silver

- Sustainable Sites**
- Green building project located on previously developed land
  - Site plan includes a stormwater management plan that meets or exceeds the requirements of the local government
  - Project site is located in an urban, suburban, or rural area that is not in a flood hazard zone
  - Project site is located in an area that is not in a flood hazard zone
- Water Efficiency**
- Water Efficient Landscaping: Irrigation system is installed
- Energy and Atmosphere**
- Energy Star: Building is an Energy Star building
  - Additional Requirements: Building is an Energy Star building
- Materials and Resources**
- Construction Waste Management: 75% of construction waste is recycled
  - Recycled Content: 10% of building materials are recycled
  - Environmental Tobacco Products: No tobacco products are used in the building
  - Low-VOC Content: Low-VOC content is used in building materials
- Indoor Environmental Quality**
- Daylighting: Daylighting is provided in all occupied spaces
  - Construction and Maintenance: Project is completed in accordance with the LEED Green Building Rating System
  - Low-VOC Content: Low-VOC content is used in building materials
  - Construction Waste Management: 75% of construction waste is recycled
- Innovation & Design Process**
- Green Building Innovation: Project is a Green Building Innovation



## PNC Firstside Center Pittsburgh, Pennsylvania




**LEED Version 2.0 SILVER**

**Water Efficiency**

**Energy and Atmosphere**

**Materials and Resources**

**Indoor Environmental Quality**

**Sustainable Sites**

**Regional Priority**


**Accredited**

**Project Team:**

Client	PNC Financial Group
Architect	U.S. Green Building Council
Interior Designer	U.S. Green Building Council
General Contractor	U.S. Green Building Council
LEED Accredited	U.S. Green Building Council


**Building Statistics:**

Project No.	1000000000
Year	2009
Location	Pittsburgh, PA
Building Type	Office
Area	100,000 sq ft
LEED Version	2.0
LEED Level	Silver
LEED Points	33
LEED Accredited	U.S. Green Building Council




## Technical Overview of LEED™

- Green building rating system, currently for commercial, institutional, and high-rise residential new construction and major renovation.
- Existing, proven technologies
- Evaluates and recognizes performance in accepted green design categories
- LEED 3.0 product development includes existing buildings, multiple buildings, core & shell, interiors, and residential

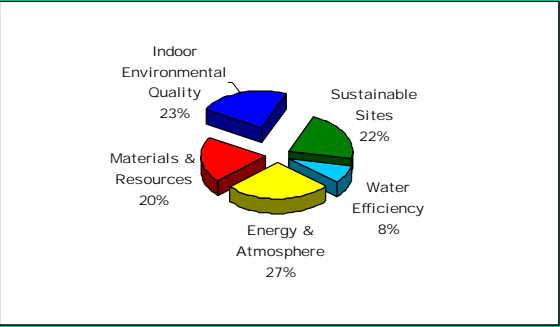


## Technical Overview of LEED™ (continued)

- Whole-building approach encourages and guides a collaborative, integrated design and construction process
- Optimizes environmental and economic factors
- Four levels of certification
  - LEED Certified 26 - 32 points
  - Silver Level 33 - 38 points
  - Gold Level 39 - 51 points
  - Platinum Level 52+ points (69 possible)



## LEED™ Point Distribution



Five LEED credit categories

Category	Percentage
Indoor Environmental Quality	23%
Sustainable Sites	22%
Energy & Atmosphere	27%
Materials & Resources	20%
Water Efficiency	8%



## LEED™ Certification Process

A three step process :

- Step 1: Project Registration
  - Welcome Packet and on-line project listing
- Step 2: Technical Support
  - Reference Package
  - Credit Rulings
- Step 3: Building Certification
  - Upon documentation submittal and USGBC review



## Certification Benefits

Recognition of Quality Buildings and Environmental Stewardship

- Third party validation of achievement
- Qualify for growing array of state and local government incentives
- Contribute to growing knowledge base
- LEED certification plaque to mount on building
- Official certificate
- Receive marketing exposure through USGBC Web site, case studies, media announcements



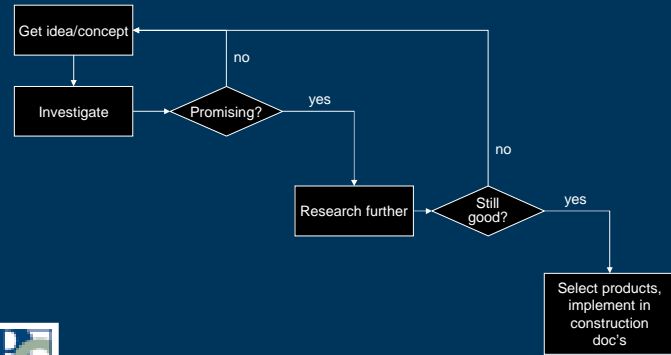
For more information  
please visit  
[www.usgbc.org](http://www.usgbc.org)

# Information Tools to Support Green Design



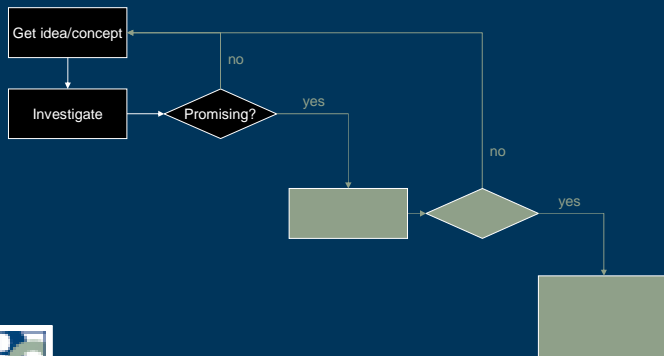
Nadav Malin  
 BuildingGreen, Inc.  
 www.BuildingGreen.com  
 Booth #524

# The Flow of an Idea



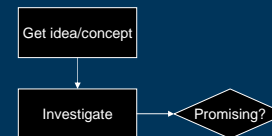
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# The Flow of an Idea: Inspiration



BuildingGreen, Inc.

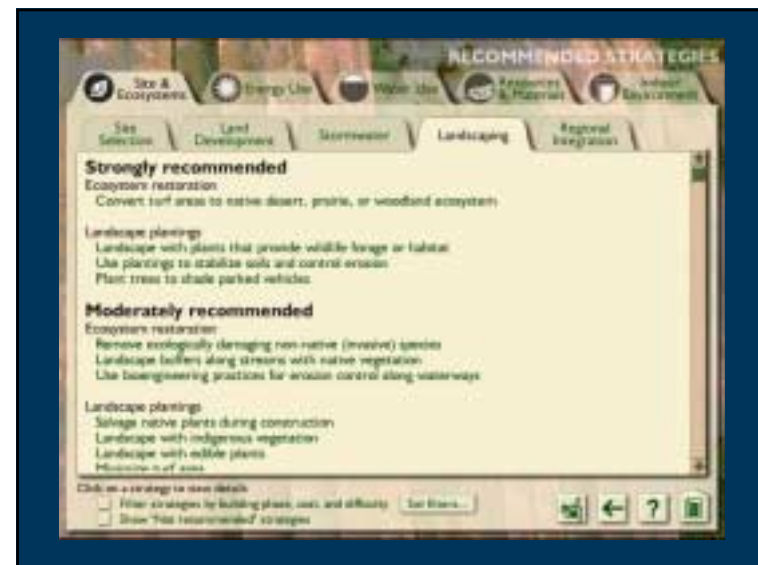
# Inspiration Tool: Green Building Advisor

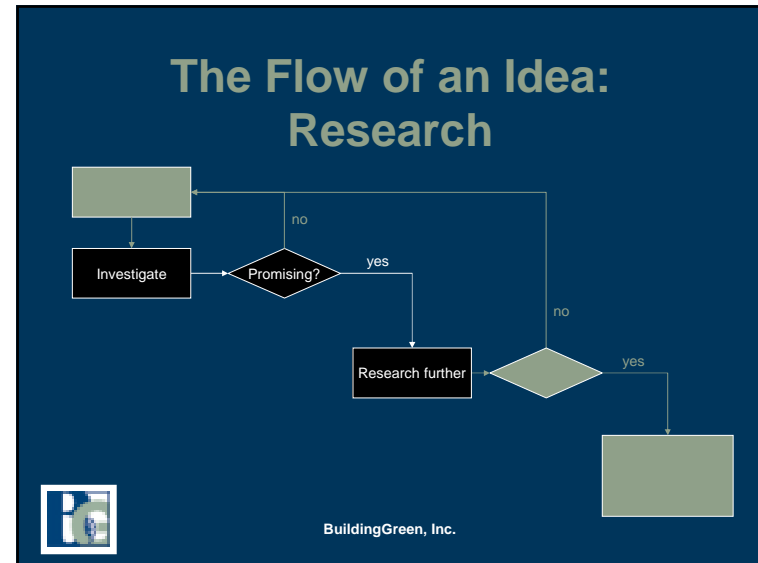


- Automatically creates a customized checklist for your project
- Over 700 strategies with details
- 22 Case Studies





BuildingGreen, Inc.





## Research Tools: EBN Newsletter & Archives

- Authoritative, comprehensive information
- Over 1,350 pages of content
- Powerful search tools
- No ads

BuildingGreen, Inc.

## Research: EBN Archives

BuildingGreen, Inc.



## Research: EBNA Search Options

The screenshot displays the EBNA search interface. At the top, there is a search box with the text "Find Results Containing Text" and a search button. Below the search box, there are options for "Options" including "Find 2 Settings" and "Find 2 Settings". A "Contents by Issue" button is visible on the left side. The main area shows a list of search results with columns for "Date", "Title", and "Author". A small inset window shows a search form with a search button and a "Clear" button.

## Research: LEED Menu

The screenshot displays the LEED menu interface. At the top, there is a search box with the text "Find Results Containing Text" and a search button. Below the search box, there are options for "Options" including "Find 2 Settings" and "Find 2 Settings". A "Contents by Issue" button is visible on the left side. The main area shows a list of search results with columns for "Date", "Title", and "Author". A small inset window shows a search form with a search button and a "Clear" button.

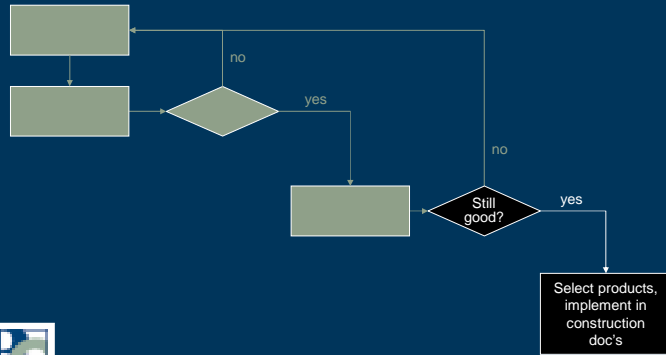
## Research: Articles by LEED Credit

The screenshot displays the LEED menu interface. At the top, there is a search box with the text "Find Results Containing Text" and a search button. Below the search box, there are options for "Options" including "Find 2 Settings" and "Find 2 Settings". A "Contents by Issue" button is visible on the left side. The main area shows a list of search results with columns for "Date", "Title", and "Author". A small inset window shows a search form with a search button and a "Clear" button.

## Research: Additional Resources

The screenshot displays a document page titled "Environmental Building News". The page contains several articles and a photo of a building. The articles are titled "Green Building: The Future is Now" and "Green Building: The Future is Now". The photo shows a modern building with a glass facade. The page also includes a "For more information" section with contact details for the Environmental Building News.

## The Flow of an Idea: Implementation



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## Implementation Tool: GreenSpec Directory



Select products, implement in construction doc's



- 1,650 products
- Descriptions by product and CSI section
- Guideline Specifications



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## Implementation: GreenSpec Directory



## Implementation: GreenSpec Browse Options



## Implementation: GreenSpec LEED Menu



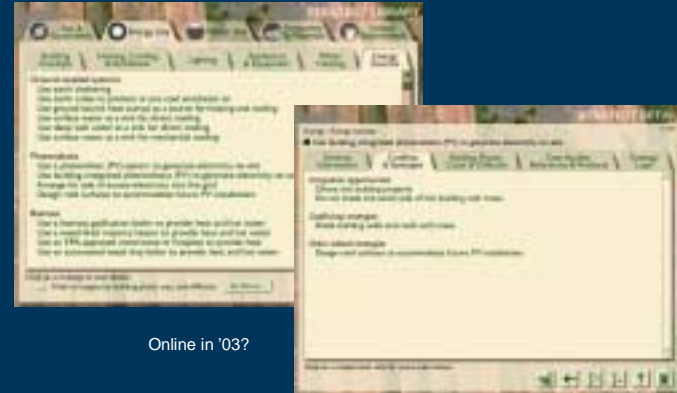
## Implementation: GreenSpec Product Screen



## Implementation: GreenSpec Additional Info



## Towards Integration: GBA Strategies



Online in '03?

## Towards Integration: Case Studies



Online now at [www.highperformancebuildings.gov](http://www.highperformancebuildings.gov),  
soon also at [BuildingGreen.com](http://BuildingGreen.com)

## Towards Integration: EBN Articles



Some online now,  
all online in '03!

## Towards Integration: GreenSpec Connections

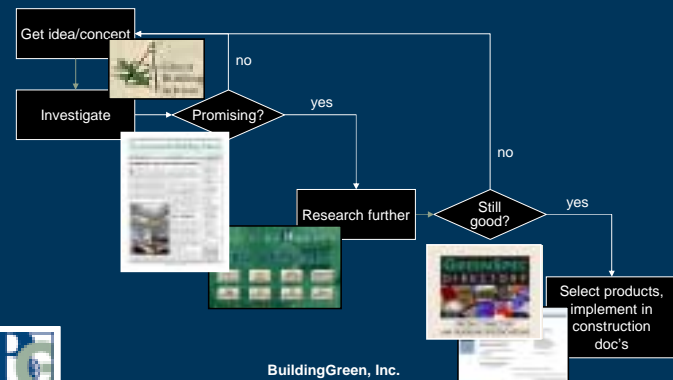


- Links from GBA strategies
- Links to/from EBN articles online
- Links to/from case studies



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## The Flow of an Idea... and Tools to Support It



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## Towards Integration: The future of BuildingGreen.com

