

US EPA ARCHIVE DOCUMENT

# LIFECYCLE BUILDING CHALLENGE 3

*designing this building, and the next...*



Enter the 2009 Lifecycle Building Challenge to shape the future of green building.

## Partners



## WHAT IS LIFECYCLE BUILDING?

Lifecycle building is designing buildings to facilitate disassembly and material reuse to minimize waste, energy consumption, and associated greenhouse gas emissions.

Also known as design for disassembly, adaptability and deconstruction, lifecycle building describes the idea of creating buildings that are stocks of resources for future buildings.

## LIFECYCLE BUILDING CHALLENGE 3: OVERVIEW

[www.lifecyclebuilding.org](http://www.lifecyclebuilding.org)

- web-based design competition
- open to professionals and students
- launching from December 2008 - August 2009

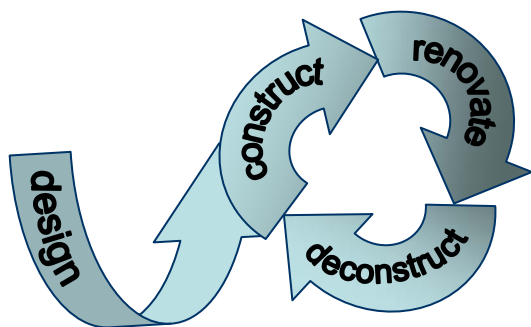
### Who should participate?

Anyone!

- architects
- designers
- structural engineers
- builders
- deconstruction experts
- reuse professionals
- recyclers
- civil engineers

## ENVIRONMENTAL IMPACTS

Reduce construction and demolition disposal and greenhouse gas emissions.



The U. S. building sector generates approximately **170 million tons of construction and demolition materials (C&D)** and **reuses or recycles less than half of those materials.**

Recovering and reusing building materials locally preserves embodied energy and reduces greenhouse gas emissions.

**Embodied energy** includes all of the energy required to extract, assemble, package, transport, install, and dispose of materials.



2008 Lifecycle Building Challenge winner: **Tripod**. Cathy Chung, Brian Kish, and Travis Brier from Carnegie Mellon University

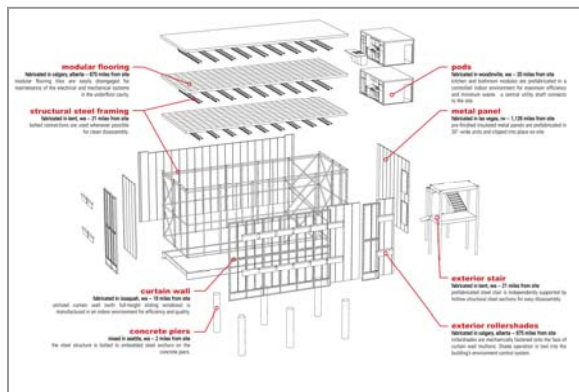
**Brad Guy, AIA, LEED AP** – Jury Chair, Building Materials Reuse Researcher, Author  
**Scott Shell, AIA, LEED AP** – EHDD Architects  
**Mark Webster, PE, LEED AP** – Simpson Gumpertz & Heger Inc.  
**Kirsten Ritchie** – Gensler  
**Mark Piepkorn** – BuildingGreen LLC

## CATEGORIES

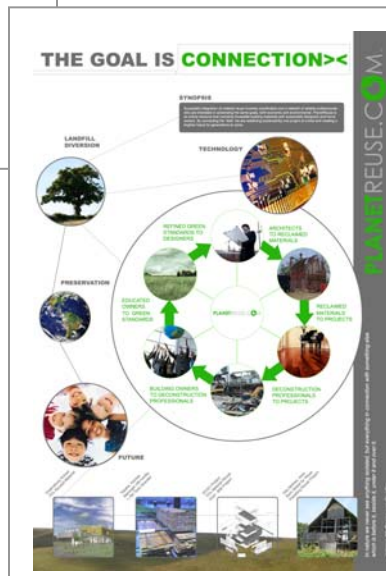
<p><b>Building</b> a whole building designed for disassembly and material reuse</p>	<p><b>Product</b> a building product designed for disassembly and material reuse</p>
<p><b>Focus areas</b></p> <p>In addition, building entries can highlight any of the following focus areas:</p> <ul style="list-style-type: none"> <li>existing buildings</li> <li>design for adaptability</li> <li>local material sourcing</li> </ul>	<p><b>Impact categories</b></p> <p>In addition, product entries can highlight any of the following impact categories within the product's lifecycle:</p> <ul style="list-style-type: none"> <li>global climate change</li> <li>stratospheric ozone depletion</li> <li>acidification</li> <li>photochemical smog</li> <li>eutrophication</li> <li>human toxicity</li> <li>ecological toxicity</li> <li>resource depletion</li> </ul>

Professionals may submit both built and unbuilt work.  
Students may submit only unbuilt work.

## EXAMPLES



**2008 Lifecycle Building Challenge winner: The Workshop, Schemata Workshop**



**2008 Lifecycle Building Challenge winner: PlanetReuse.com**



**2008 Lifecycle Building Challenge winner: Loblolly House, KierenTimberlake Associates**