

# Deconstruction and Reuse

**“Waste is just a product of Bad Design!”**

- Brad Guy

Presented by: The Building Material Reuse Association  
Joe Connell  
Executive Director

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# Definition of Design



purpose, planning, or intention that exists or is thought to exist behind an action, fact, or material object.





# How - did we get here?

- 🌐 If Building Material Reuse is as old as buildings themselves, why isn't it the standard now?



Cause we use to think the world was a lot bigger...





# Subsidies



# Who - is the reuse industry ?

- Deconstruction
- Retail retailers
- Reuse Makers
- Up-cyclers and DIY'rs
- Reuse Remanufacturing
- Architects and Designers
- Reuse Remodelers and Builders



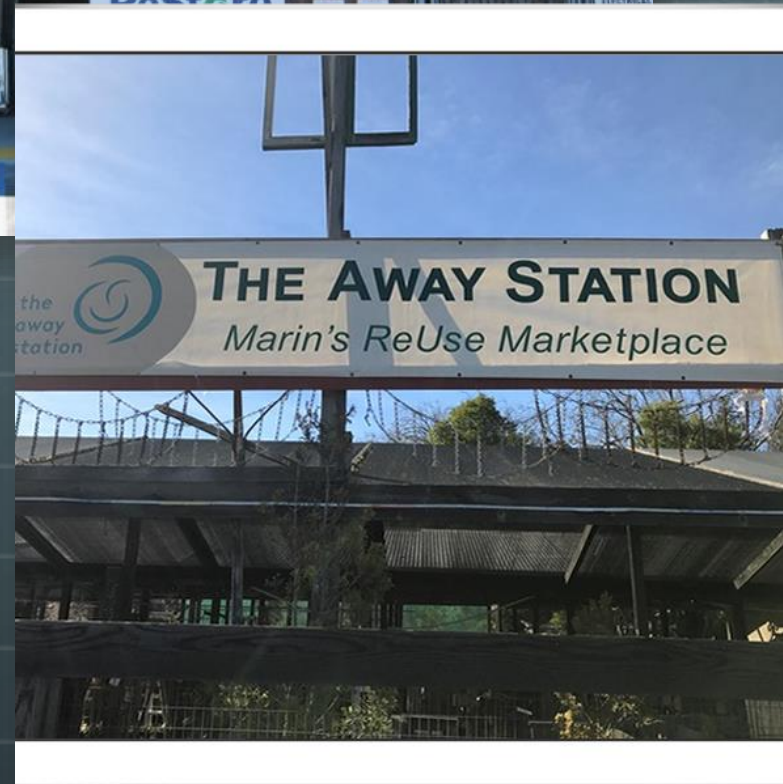
# Deconstruction



**“The systematic dismantling of a structure in order to preserve the building materials for reuse”.**

# Retail Outlets

thousands  
nationwide  
and growing fast





# Up-cyclers and Re-makers



# Why - is our industry so imperative?

- Why is a virgin 2x4 cheaper than a reclaimed 2x4?
- [and why does a door see more of the world than I do?]



# 1 Billion board feet

The estimated amount of dimensional 2x4 and 2x6 material in present residential US housing.



# C&D diversion

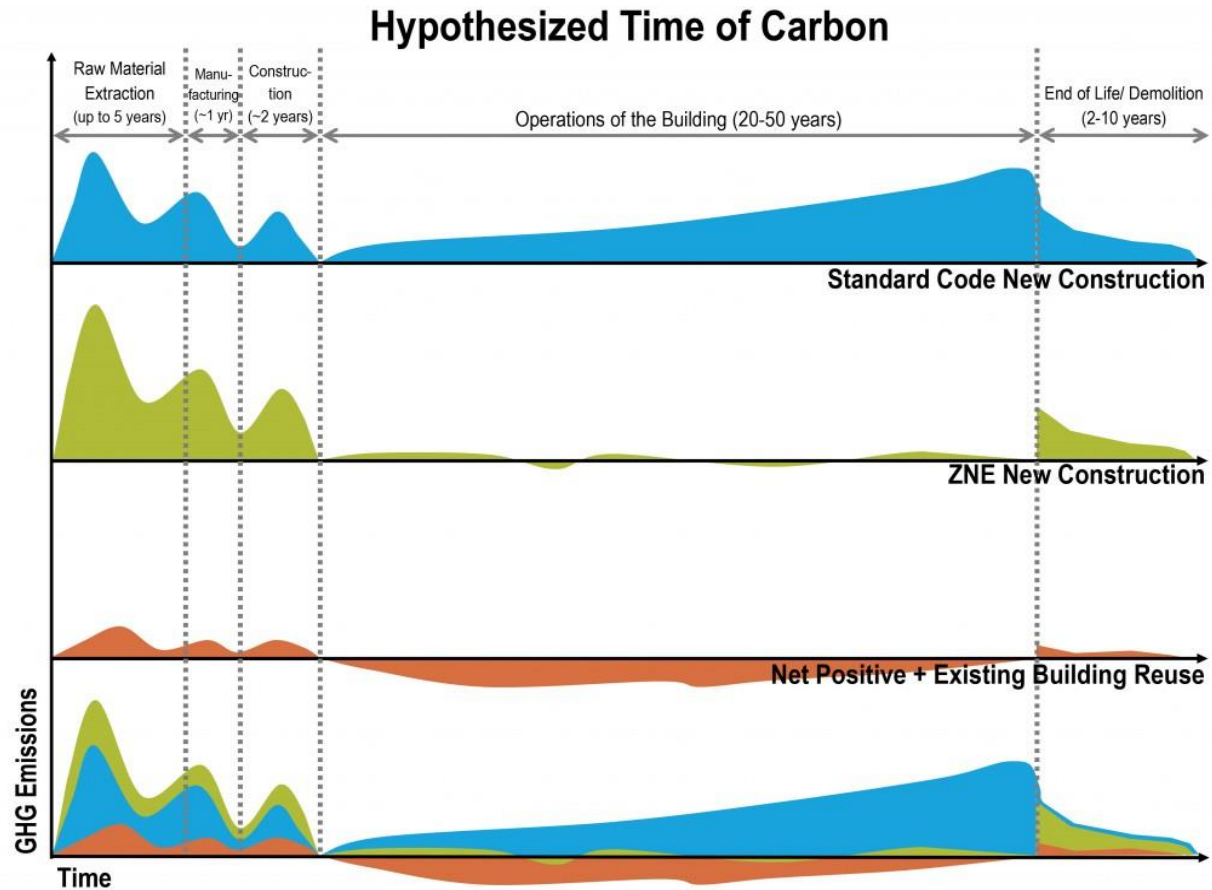
Each year more than 17 million tons of recoverable C&D wood materials are landfilled at a cost of more than \$500 million.



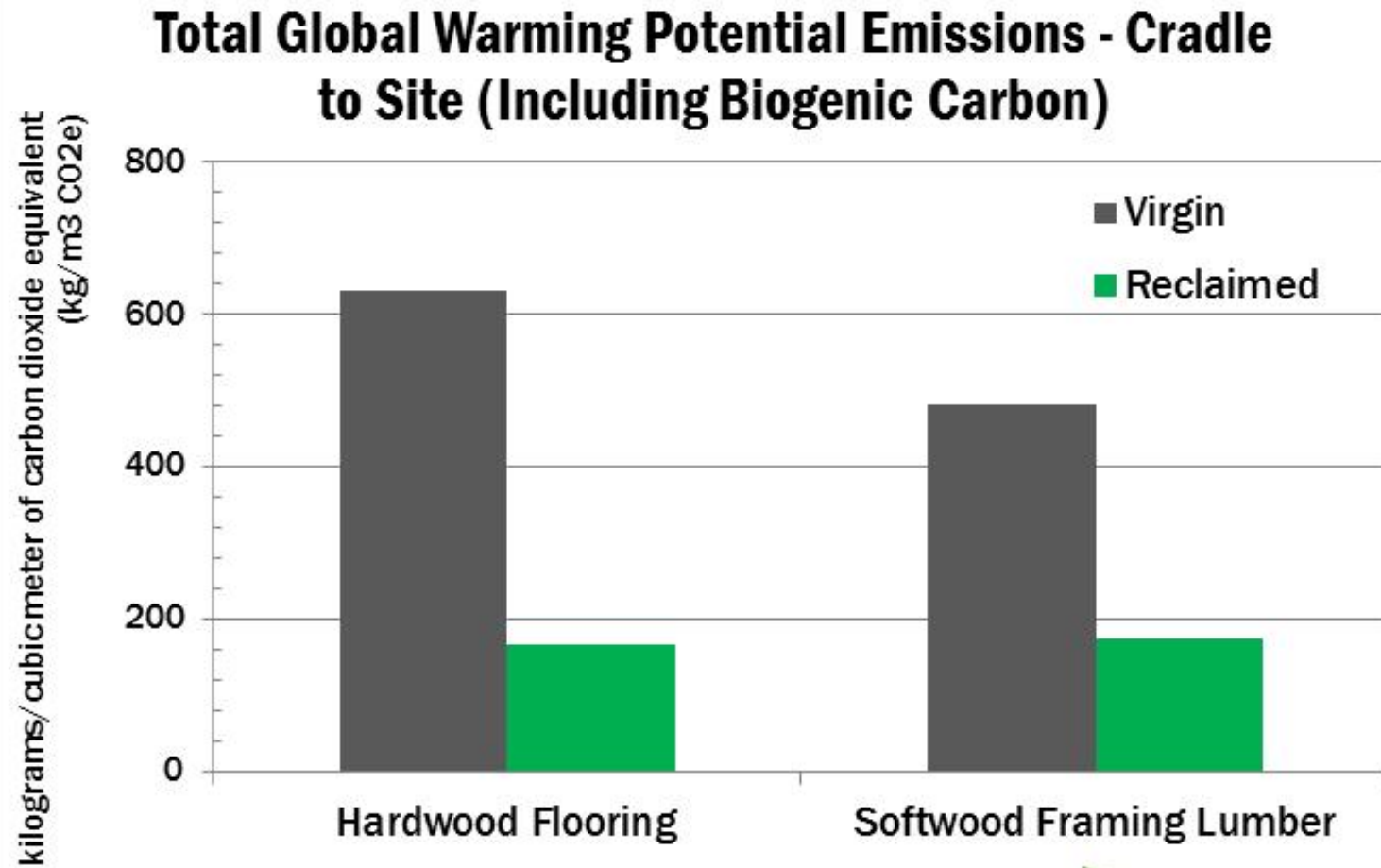
“Municipal Solid Waste(MSW) and Construction and Demolition(C&D) Wood Waste Generation and Recovery in the United States” Dovetail Partners



# Existing building Reuse saves Embodies Carbon



# Environmental Impact of Sourcing Reused Materials



Source: *Life Cycle Energy and Carbon Emissions for New and Recovered Softwood Framing Lumber and Hardwood Flooring*  
Bergman, et al



# Jobs

The reuse and recycling industry produces 7 jobs per 1000 lbs of MSW.

Compared to less than 1 job per 1,000 lbs of waste landfilled.



- "More Jobs, Less Pollution: Growing the Recycling Economy in the U.S."
- Prepared by the Tellus Institute November, 2011

# Additional jobs

Not yet  
measured  
are the  
thousands of  
jobs in reuse  
retail  
operations  
across the  
country...





# What's up in our Industry?

We are talking about deconstruction with:

- Atlanta
- St. Louis
- Pittsburg
- San Francisco
- Vancouver B.C.
- Seattle
- D.C.
- And more...





# What we are seeing...

- Infill and gentrification leading to the demo of old homes, ie. Portland, SF
- Urban blight and abandoned neighborhoods. Milwaukee, DC...
- Barns and old factories.
- New construction continuing with outdated practices.

# What's exciting

- Cities, counties and states limiting the waste of reusable materials.
- Salvaged materials sought after for commercial reuse.
- Growing DIY market for used building materials.
- Architects and designers paying more attention to reuse with Circular Economy, Zero Waste, Lifecycle Building Challenge formats.
- Agencies seeing the potential in the reuse industry for jobs and workforce development.

# Policy Examples

- Language/law/ordinance that explicitly
  - Requires reuse and deconstruction (e.g. 5% reuse requirement, *Cook County*)
  - Restricts the use of demolition, or the landfilling of materials (e.g. Ban on C&D waste in landfills, *Massachusetts*)
  - Requires reuse and deconstruction (*Portland, Milwaukee, Palo Alto ...* )



# On the horizon

- Research on the potential for used dimensional lumber in the mainstream market
- Increase in government agencies interested in code and policy changes.
- Increased awareness of the difference between recycle and reuse.
- More research being done on embodied carbon, full life cycle analysis of buildings, and designing for Zero waste.

# Industry challenges

- The reuse industry lacks serious investment
- The industry tends to be scattered group of hands on folks that lack an organized sharing of resources, knowledge, and passion to drive our market.
- Our industry is build on word of mouth to grow our businesses.

# Summary

I remember seeing Woodsy as a kid. He was quite the lone ranger.

I see so many amazing people working on changing our world that I am heartened.

Our next generation will once again change the world. Lets give them the best tools we can. Joe





# What's the BMRA up to?

- 2019 Conference in Pittsburgh
- Redeveloped certification programs.
- Expanding the network within our industry
- Advocating for change locally and nationally.

Please join us in “working to create a vibrant building materials reuse economy”.

Joe Connell  
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