

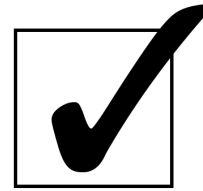
# Life Cycle Assessment = A Comprehensive Environmental Impact of Materials



## Single Attributes



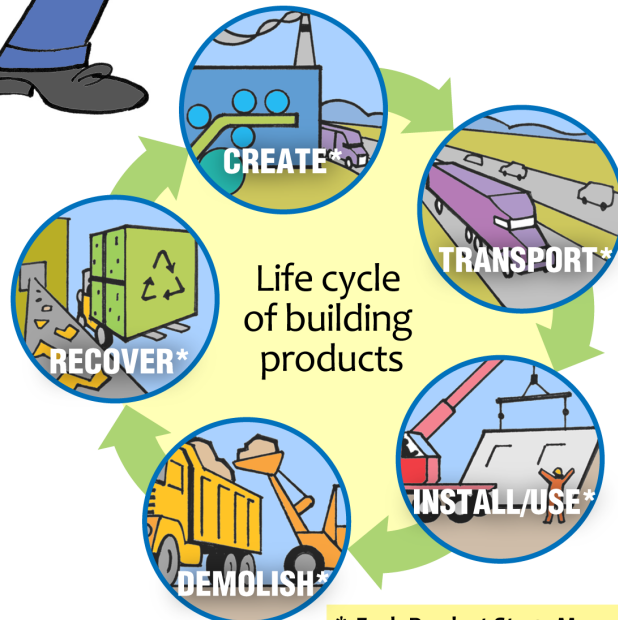
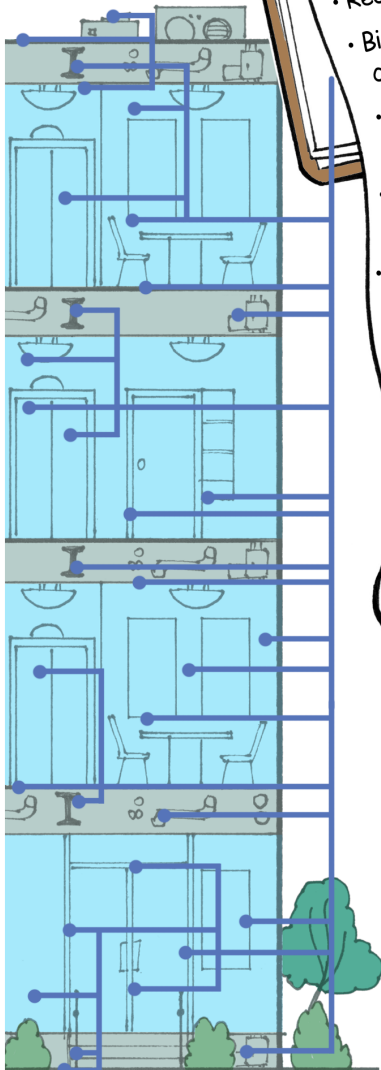
- Recycled Content
- Reusability
- Recyclability
- Biobased content
- Indigenous materials
- VOC emissions
- Other emissions
- Durability?
- Single Attributes: good start...
- What's the whole story?



## Life-Cycle Assessment



- Can be...
- Certified
  - Third-Party
  - Comprehensive



### LCA Standards Integral to:

- USGBC
- UL Environment
- DOE Energy Star
- US Government

### \* Each Product Stage Measures:

- Primary Energy Use
- Global Warming
- Acidification
- Eutrophication  
(Inorganic compounds stimulating excessive plant/algae growth in water bodies)
- Ozone Depletion
- Smog Formation

(ISO Standard's elements of Life Cycle Assessment)