

The Importance of Codes & Standards to Support the Building Industry

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*“Sustainable Construction in Commercial Buildings
through Building Codes and Standards”*

Pan American Standards Commission (COPANT)

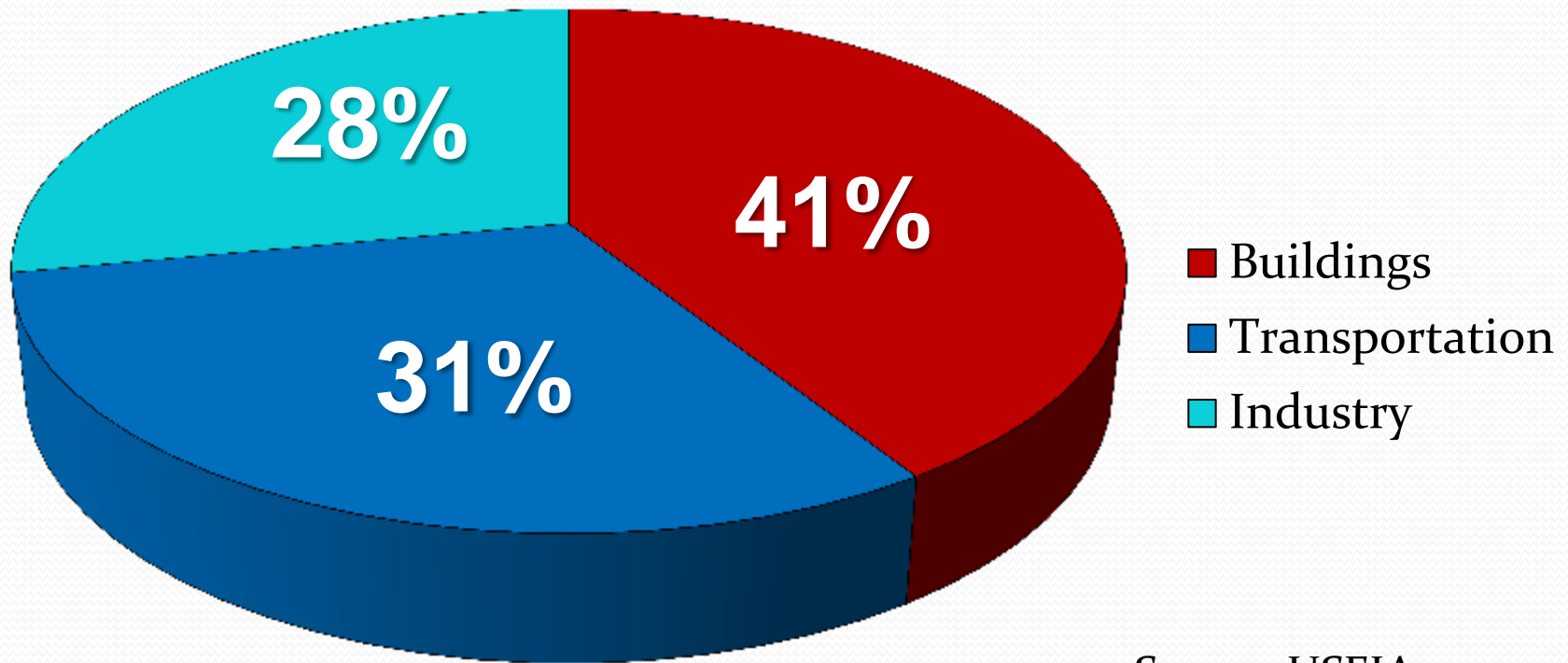
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Sustainable Development

- “...meet the needs of the present without compromising the ability of future generations to meet their needs.”
 - *Our Common Future*, Report of the World Commission on Environment and Development, G. H. Brundtland, chairman, 1987.

Buildings Matter!

Total Energy Use



Source: USEIA - 2012

What makes a building green?

- How does it impact the natural environment?
 - Climate change
 - Ozone destruction
 - Habitat destruction
 - Pollution of water, air & soil
 - Depletion of non-renewable natural resources
- How does it impact the occupants & society?
 - Health, safety, comfort
 - Purpose & Function
 - Cost
- Green buildings → LCA!
 - Minimize negative impacts → *Eliminate* negative impacts?
 - Maximize beneficial impacts

Green Buildings



- Indigenous cultures
 - Renewable resources
 - Designed for the local climate

- Meets LEED Credits
 - Near public everything
 - 100% water savings
 - 100% energy savings
 - 100% recycled content
- Does not meet Code!



Buildings Must Perform in Many Ways

- Key Design Parameters
 - Purpose / Function
 - Beauty / Aesthetics
 - Structural Integrity
 - Life Safety (fire)
 - Code Compliance
 - Cost
 - Energy
 - Durability
 - IEQ / Comfort & Health
 - Sustainable



Building Codes

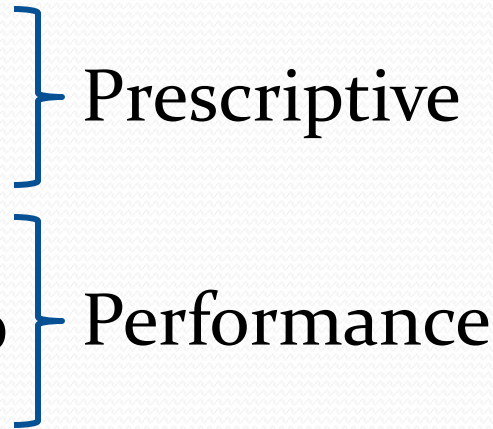
- Regulatory requirements pertaining to the design & construction of buildings.
 - Established law, adopted by the AHJ
- Establish the rules for:
 - What buildings can be built
 - Where buildings can be built
 - Design of buildings
 - Construction methods
 - Materials that can be used
- Minimum requirements to protect health, safety, general welfare & affordability.

Building Codes

- *“The worst building you can legally construct!”*
- Buildings are complicated networks of interacting systems.
 - High performance buildings are less forgiving
 - Building codes do not look at how each system impacts every other system or function.
 - *“Meets code”* may not be good enough, but...
 - Lowest first cost usually wins
- Codes define basic conditions of acceptance
- Drives innovation but also resists change
- Codes rely on Standards to fill in details

Building Materials Standards

- Define the materials
 - What they are
 - What they are not
 - What they must do
 - What they must not do
 - How they are tested
- Level the playing field!
 - Metrics by which quality & performance can be judged
 - What's not included is also important!
- Standards convert proprietary products into commodities!

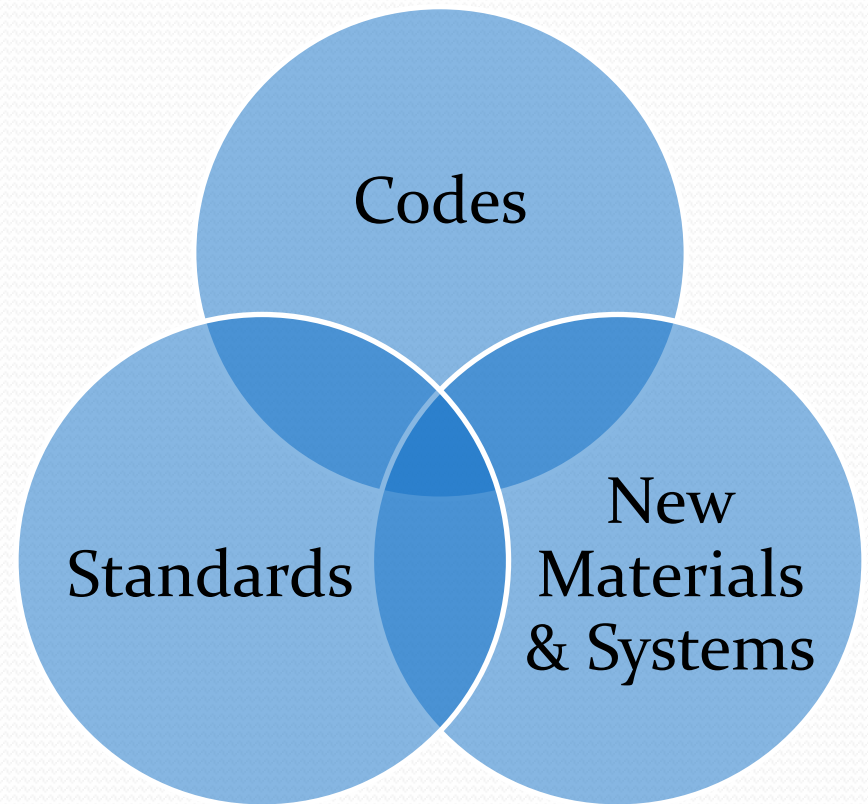


Building Materials Standards

- Used by the building code
 - Must comply
 - Drives market changes
- Not cited by the code
 - Use is optional
 - Many standards are not used directly by the codes but are needed by industry

Building Codes & Standards

- Codes
 - Establish what materials can & cannot be used
 - Create strong, market driven incentives & disincentives for innovation
 - Opportunities & risks exist where codes are silent
- Standards
 - Establish how products are compared
 - Good standards *must* be
 - Meaningful, *and*
 - Measurable



New Codes, Standards & Rating Systems for Green Buildings

- Needed for the future
- End greenwashing
- Standards alone are not sufficient
- Codes drive industry adoption



Thank you