



35<sup>TH</sup> ANNUAL CONFERENCE & EXPOSITION  
**CHICAGO '10**  
CONFERENCE: Sept. 14-23, EXPO: Sept. 22-23  
Navy Pier® Chicago

# Our Industry Goes Green

## What You Need to Know

Doors & Hardware Impact  
**SUSTAINABILITY**

# Presenters

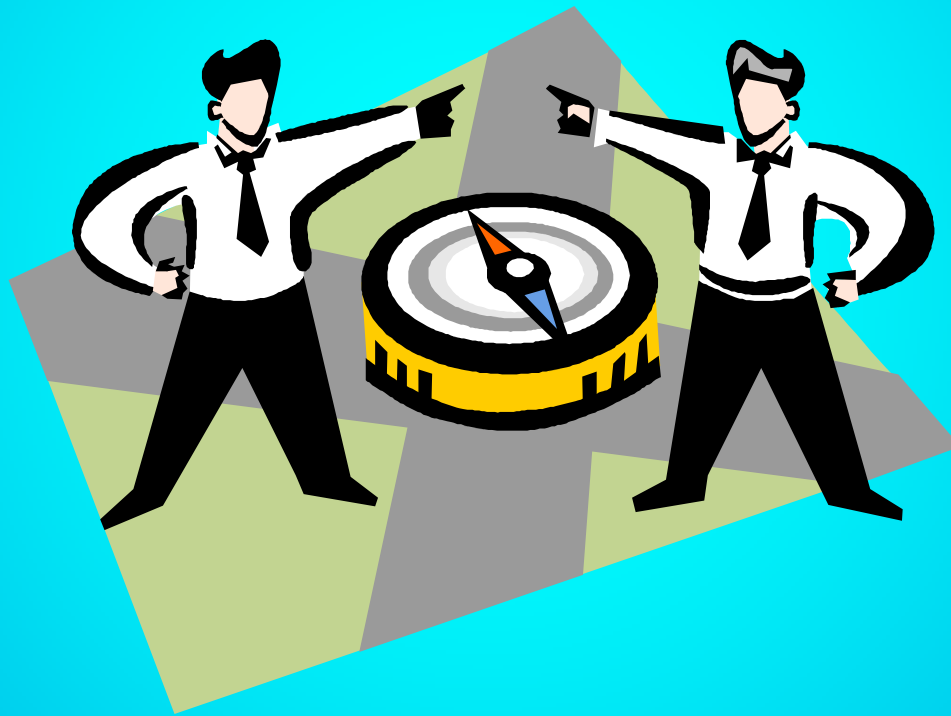
## **Tim Petersen, LEED AP**

- 31 years in the opening industry, working for installers, distributors, and manufacturers.
- Extensive knowledge in wood doors.
- Vice President – Sales  
VT Industries Inc.  
Architectural Door Division

## **Steve Farley, CSI, CDT LEED GA**

- 22 years in the opening industry working for manufacturers.
- Extensive knowledge in wood doors, specifications and environmental issues
- Regional Sales Manager  
Mohawk Flush Doors

# Why Two Wood Door Guys?



# *Because this is about our industry... and your business!*

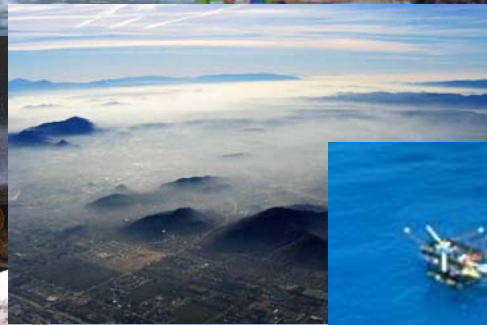
- The environmental movement is here to stay
  - It will become larger, significant part of your business
  - Are you keeping up with this major market shift?
- What's behind the movement and trends
- How are you positioned to sell green?
- Voluntary and mandatory green programs/standards
- Impact on the door & hardware distributor
- What opportunities and risks do you face?
- What is next?

# Today's Discussion

- History of environmental movement
- How does our market impact the environment
- What is being done about it?
- Business opportunities and risks
- What you need to know



Matt Snelman



# What's Behind the Movement

- 1897 Forest “Organic” Act
- 1900 Lacey Act & 2008
- 1970 Earth Day
- 1970 Formulation of the EPA
- 1980's - Legislation moves slowly – Voluntary standards start to develop
- 1997 USGBC

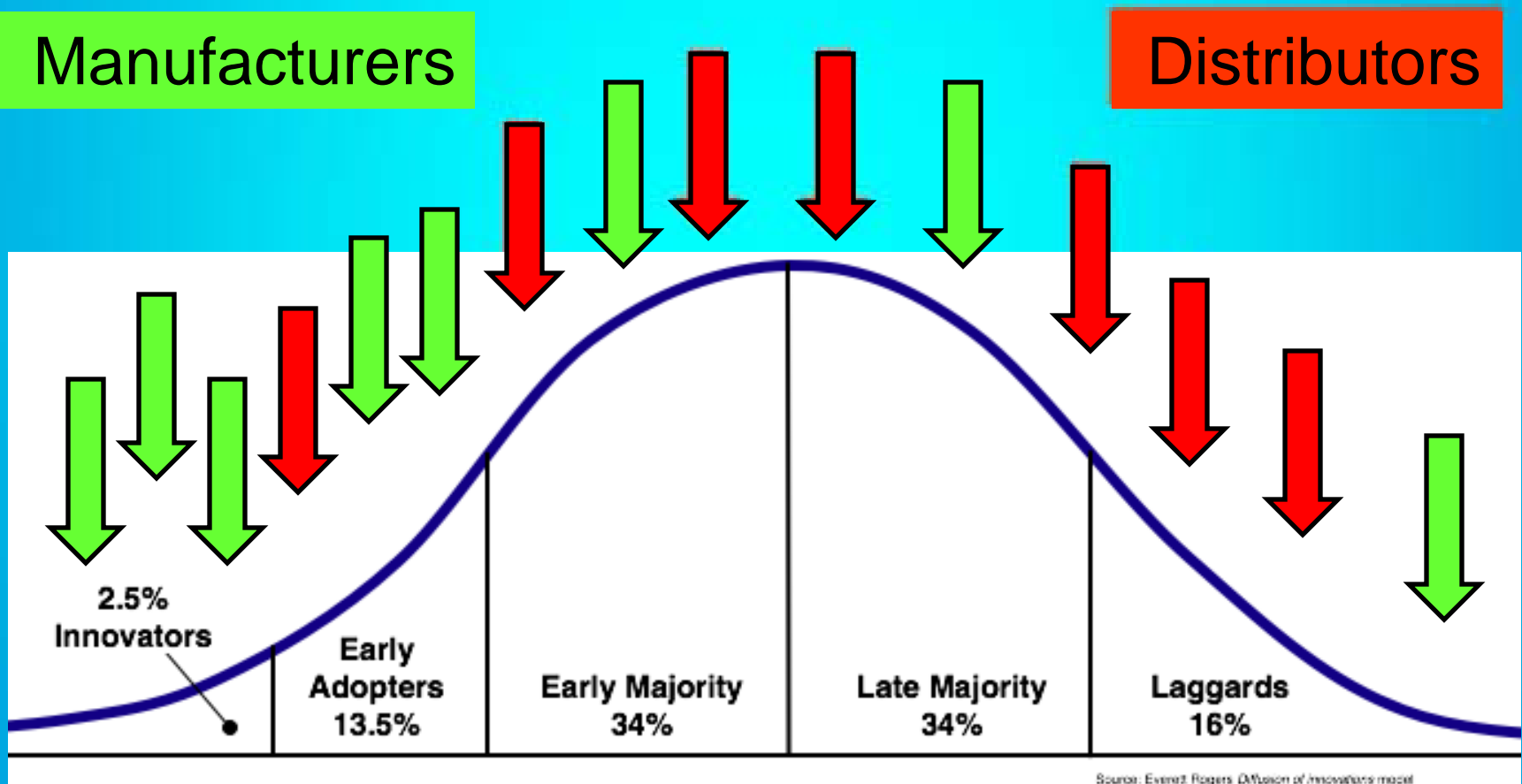


# Where are we now?

## *Where is your company?*

Manufacturers

Distributors



# IMPACTS OF U.S. BUILDINGS ON RESOURCES

**40%** primary energy use\*

**72%** electricity consumption\*

**39%** CO<sub>2</sub> emissions\*

**13.6%** potable water consumption\*\*

Sources:

\*Environmental Information Administration (2008). EIA Annual Energy Outlook.

\*\* U.S. Geological Survey (2000). 2000 data.

**ENERGY  
USE**

**24%\* -50%\*\***

**CO<sub>2</sub>  
EMISSIONS**

**33%\*\*\* -39%\*\***

**WATER  
USE**

**40%\*\***

**SOLID  
WASTE**

**70%\*\***

**Green Buildings Can Reduce...**

\* Turner, C. & Frankel, M. (2008). Energy performance of LEED for New Construction buildings: Final report.

\*\* Kats, G. (2003). The Costs and Financial Benefits of Green Building: A Report to California's Sustainable Building Task Force.

\*\*\* GSA Public Buildings Service (2008). Assessing green building performance: A post occupancy evaluation of 12 GSA buildings.

**THE NEXT  
GENERATION'S  
PERSPECTIVE  
WILL INCREASE  
GREEN BUILDING**

**89%** choose brands aligned  
with social cause

**74%** listen to brands aligned  
with social cause

**69%** shop for brands aligned  
with social cause

**66%** recommend brands aligned  
with social cause

# Green Building Occupants Are Healthier & More Productive

- In the U.S., people spend, on average, 90% or more of their time indoors\*
- Green buildings typically have better indoor air quality and lighting

\* Source: The Total Exposure Assessment Methodology (TEAM) Study. EPA 600/S6-87/002. U.S. Environmental Protection Agency. 1987.

## Why the Demand?

- Unprecedented level of government initiatives
- Heightened residential demand for green construction
- Improvements in sustainable materials

# Projected Green Building Market Value

	2006	2010
Projection U.S. Market	\$12 billion (new) \$130 billion (renovation)	\$30-\$60 billion (new) \$240 billion (renovation)
Commercial & Institutional	\$4 billion	\$10-\$20 billion
Residential	\$8 billion	\$20-\$40 billion

# Environmental Groups, Terms, Programs, Standards, Codes

- USGBC
- LEED
- FSC
- WGBC
- SCS
- CARB
- Green Globes
- Green Guard
- SPiRiT
- EPA
- ISO 14021
- BREN
- SFI
- Chain of Custody
- NAUF
- Smart Wood
- Rain Forest Alliance
- American Tree Farm
- CAL Green
- Collaborative for High Performance School
- ANSI S12.60.2002

# Voluntary Standards

- Leadership in Energy and Environmental Design - **LEED**
  - Collaborative for High Performance Schools - **CHPS**
  - **FSC** Chain of Custody certification
  - Recycled Content certification (ISO14021)
  - Product off-gas (**VOC**) testing
  - Acoustical requirements
- ✓ Note: Voluntary standards are being adopted into building codes & becoming law
- ✓ Local, State and Federal Government contracts

# Mandatory Requirements

- **CARB – California Air Resources Board**
  - A phased reduction in the allowable limits for composite wood formaldehyde VOC limits
- **Environmental Protection Agency**
  - Federal EPA, State EPA (Senate Bill S.1660)
- **Lacey Act – 1900, Amended 2008**
  - Severely restricts the importing and exporting of plant and plant bi-products without an import declaration
  - Gibson guitar raided by USF&W in November 2009

# California Air Resource Board

## (CARB/CA EPA)

- April 24, 2007, CARB approved new standards for the emission of formaldehyde from composite wood products.
  - Likely leading to the elimination of urea-formaldehyde
  - 2 phase testing approach
    - January 1, 2009 - 0.18 ppm
    - January 1, 2011 - 0.09 ppm
  - Affects hardwood plywood, particleboard and medium density fiberboard (MDF)
- ULEF allowed (ultra-low emitting formaldehyde)
- Will require inventory management for compliance
- Distributors, fabricators, retailers must sell pre-phase 1 inventory by 12/31/11

# Formaldehyde Standards for Composite Wood Products Act

- *Toxic Substances Control Act to reduce the emissions of formaldehyde from composite wood products, and for other purposes*  
(Senate Bill 1660)
  - Signed into law by President Obama, July 07, 2010
  - Implementation July 1, 2013
  - Same as CARB Phase II regulation
    - 0.09 ppm emission level for particleboard, plywood and MDF

# The Lacey Act

- Passed by Congress on May 22, 2008 - Bans commerce in illegally sourced plants and their bi-products — including timber and wood products. Amendment to a 100-year-old statute
- Will help to control legal logging and other illegal plant trade
  1. Prohibits trade in plant and plant bi-products that are illegally sourced from any U.S. state or any foreign country.
  2. Requires importers to declare the country of origin of harvest and species name of all plants contained in their products.
  3. Establishes penalties for violation of the Act, including forfeiture of goods and vessels, fines and jail time.



# Federal, State, Local Green Building Initiatives

## Action taken

- Legislation
- Executive Orders
- Resolutions
- Ordinances
- Policies
- Incentives

## Action by:

- **44** states
  - **243** localities
    - **168** cities,
    - **42** counties
    - **33** towns
- **35** state governments including (PR)
- **14** federal agencies

Federal government: **241** certified projects, pursuing another 3420\*

State governments: **416** certified projects, pursuing another 2008\*

Local governments: **611** certified projects, pursuing another 3164\*

\*USGBC

# NEW & Developing Codes

- **CALGREEN** 2010 California Green Building Standards Code: *Nations First Mandatory Statewide Standards Code to Green Construction and Fight Climate Change. Mandatory as of January 1, 2011*
  - Requires diversion of a minimum of 50% of construction waste from the site to be salvaged or recycled
  - Requires low VOC interior finish materials such as paints, carpet, vinyl flooring and particle board
  - Composite wood products must meet formaldehyde emission standards.
  - Other voluntary requirements
- **International Green Construction Code (ICC)**
- **ASHRAE/IES/USGBC** Green standard for code adoption

# Impact on distributors

- Another major change: NFPA80, Positive pressure
- Knowledge of Green requirements: Specifications, codes, environmental laws, LEED and other GBRS
- Product knowledge & documentation
- Inventory management (CARB, S.1660)
- Product's complexity will continue as will the required documentation
- Education and training
- Compliance & third party certifications
- Strategic advantage



# FSC Chain of Custody

Forest Stewardship Council

Standard-setting organization

Forest Stewardship Council

Develops forest management standard

Accredited Certifier

SmartWood, SCS

Landowner

Jon Doe Forestry

Manufacturer

XYZ Industries

Distributor

We Sell Doors Inc.

Third-party certifier accredited by the standard-setting organization, and audits channel to ensure compliance with standard.

May 2008 - distributors must be FSC COC certified to pass on FSC claim to green projects.

# FSC's Influence on the Door Industry

- Only recognized standard by the USGBC for Certified Wood
- Requires Chain of Custody certification at every level of ownership (legal custody)
- Wide architectural acceptance
- Controlled wood may limit some product availability

# On Its Way!

## Product Life Cycle Analysis (Assessment) LCA

*“The evaluation of the environmental impact of a given product or service caused or necessitated by its existence.”*

The measurable environmental consequences of a given product or service based on the resource consumption used in its raw material sourcing, production, distribution, use and disposal, including all intervening transportation steps.

The sum of all those steps is the life cycle of the product. Less environmental burdensome product can be chosen.

# Green Risks & Rewards

## Risks

- Overlook green product requirements in spec
- Bid/order wrong product
- Bid too many green product features, too costly
- Not being in compliance (FSC – COC, CARB, Code)
- Be seen as lacking green knowledge - laggard
- Lose work/lose time
- Financial/legal loss

## Rewards

- Knowledgeable in product requirements – add value
- Bid the right product for job
- Negotiate from strength
- Promote your compliance
- Win/close work
- Save time
- Financial gain
- Market your company's green initiatives

# Current and Future Reality:

## You will become the go-to expert

DHI members must manage information/compliance for:

- EPA, CARB, Lacey Act and other regulations
- Code compliance
- Voluntary and mandatory standards
- FSC Chain of Custody certification
- MR 4, MR5, MR6, MR7, IEQ 4.4 (Quiz?)
- Enforcement, product claims, etc.
- Specified green requirements, supply and documentation (Division 1 AND Division 8 of specifications, green references)
- How green is “your” business?
- Companies with major green initiatives in their sales and operations will add value to project teams



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Thank you!