

Sustainability Product Standards: Green Expectations of a Changing Marketplace

September 24, 2015



Agenda

- **Who is NSF International**
- **ANSI Standards Development Process**
- **National Center for Sustainability Standards**
- **ANSI Building Product Sustainability Standards Overview**
- **Sustainability Standards Case Studies**
- **Success Stories**



NSF INTERNATIONAL

Protecting Public Health and Safety Around the World”



A Little History...

- Americans began dining out in the late 1930's.
- State health officials monitored food service establishments for sanitation using a variety of criteria.
- Inconsistent rules and regulations arose, varying from town to town, state to state. Hence...
- A need for uniform national standards; NSF brings regulators, industry, consumers and public health officials together.



NSF Helps People Live Safer

- We carry out this human health and safety mission by:
 - Writing standards to promote the safety of food, drinking water, indoor air, dietary supplements, consumer products and the environment
 - Certifying products to these standards
 - Conducting safety audits for the food, water and consumer goods industries
 - Developing sustainability solutions
 - Certifying to ISO standards
 - Developing training and education programs



NSF is a Global Leader in Public Health and Safety

- 1,700+ experienced professionals: microbiologists, toxicologists, chemists, engineers and public health experts
- Service provider to over 50,000 organizations in 120 countries
- Developed more than 90 national consensus standards
- Certifier of more than 300,000 different products
- 160,000 audits conducted and 13,000 products tested annually
- 254,000+ square feet of state-of-the-art laboratories in North America, Europe, Latin America and Asia, plus partner labs around the world
- Innovative information technology capabilities.



American National Standards Institute (ANSI)

- A private, non-profit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment systems in the private sectors



NSF currently has 90 standards

- Food Equipment
- Food Processing Equipment
- Dietary Supplements
- Drinking Water Treatment Units
- Drinking Water Additives
- Wastewater Treatment Technology
- Plastics Piping & Components
- Pools, Spas/Hot Tubs
- Biosafety Cabinetry
- **Sustainable Building Products**
- Environmental Management Systems
- Organic Personal Care

Why an ANSI Standard?

Harmonization/coordination

Credibility

Opportunity for
participation by
stakeholders

Timely review and revisions

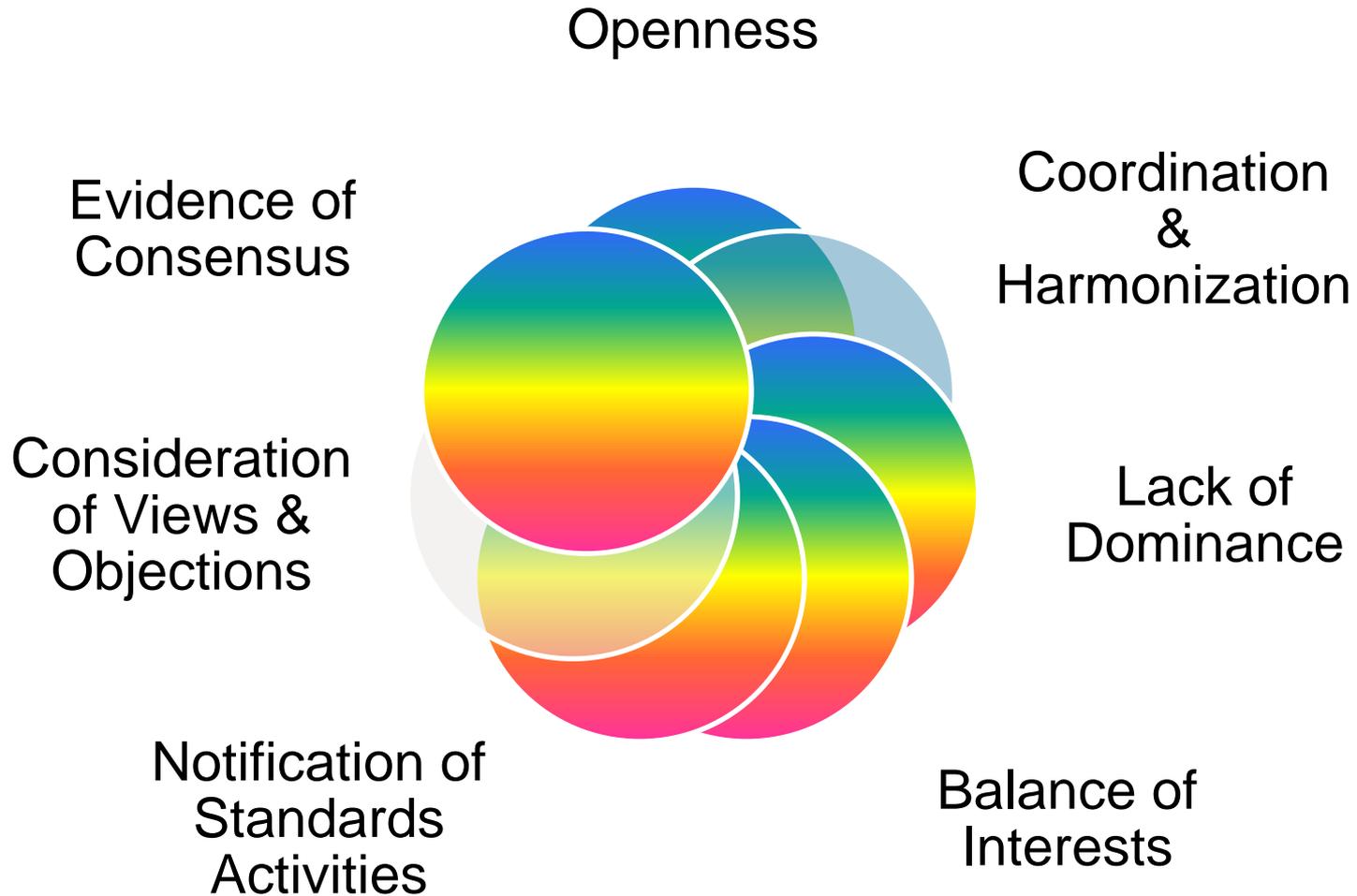
ANSI Standards

Single, consistent set of voluntary national standards

Verify openness and due process

Consensus of those directly and materially affected

ANSI Benchmarks for Due Process



Bringing Industry, Regulatory and Consumers Together



Industry

Aerospace, Automotive, Building and Construction, Food, Chemical, Consumer Products, Pharmaceutical, Medical Device, Dietary Supplement, Water Distribution and Treatment, Sustainability.



Users

Media, Educators, Consultants
Consumer Groups

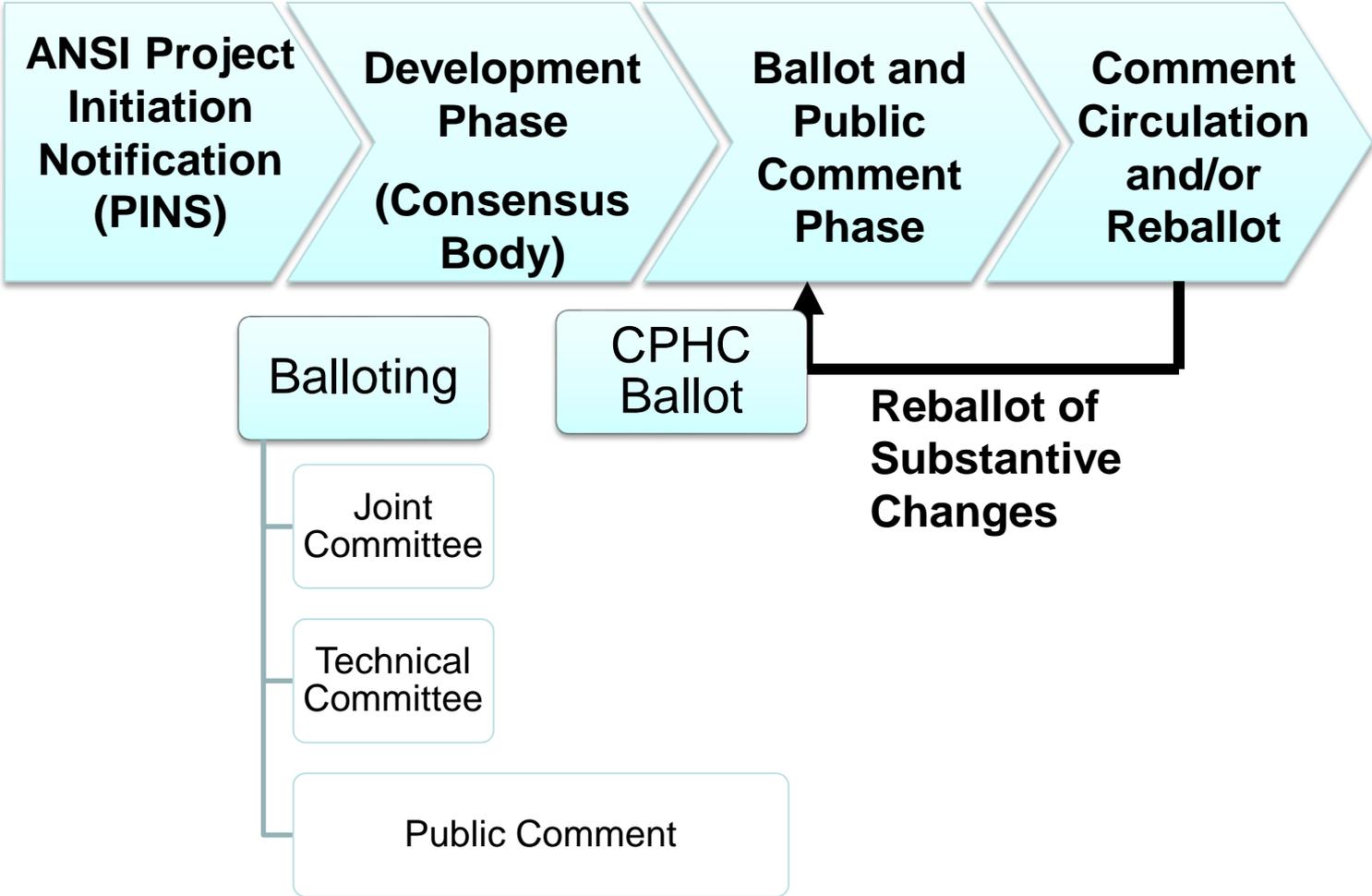


Regulators

USDA, EPA, FDA, CPHC, HC, GSA and International, National, State, Local Government Agencies

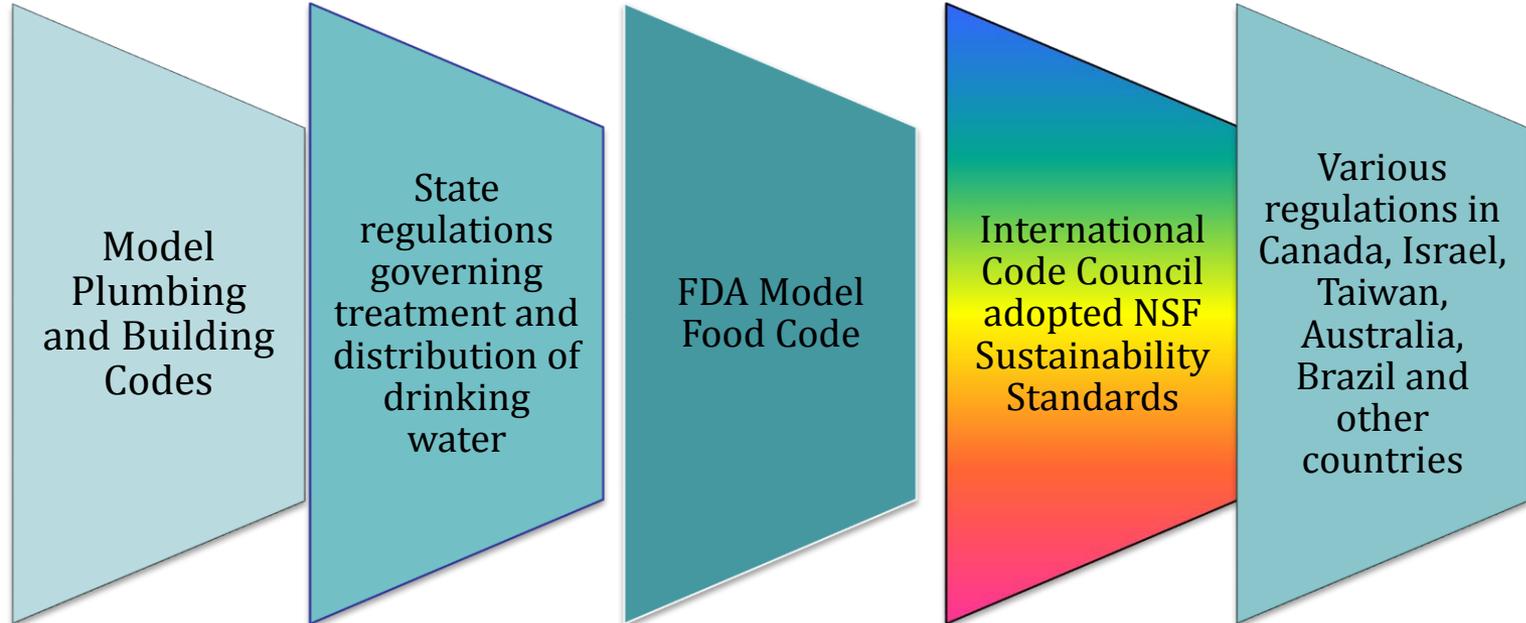


ANSI-Based Consensus Process



Use of NSF/ANSI Standards

NSF/ANSI National Standards are referenced in regulations and legislation throughout the U.S. and internationally.



NSF Core Business Units





NSF's goal in sustainability is to provide credible, transparent methods, criteria and assessments that create stakeholder value, and that further support our mission to protect and improve human health.

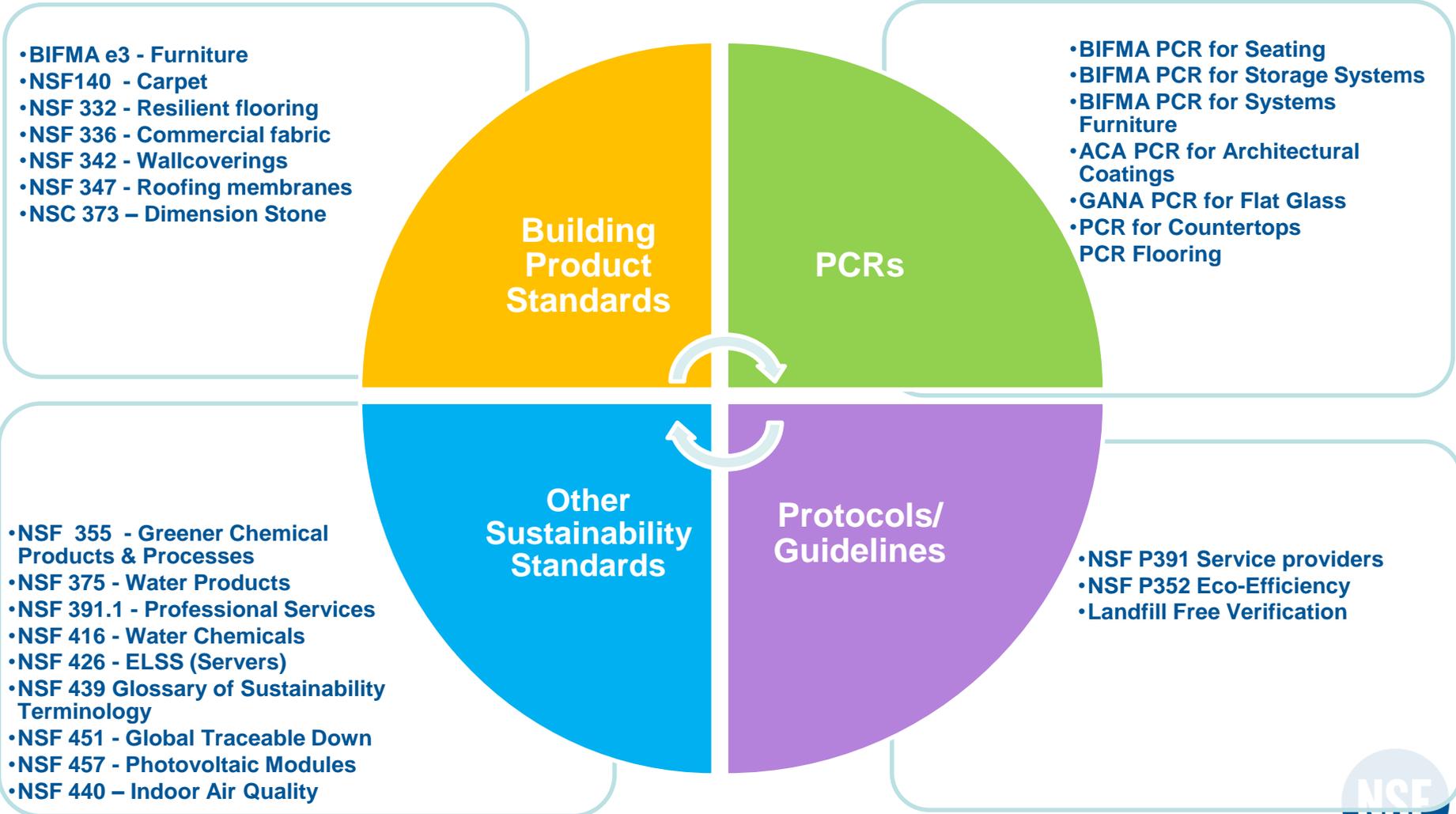


NSF Sustainability

NSF Sustainability offers a range of business solutions, including sustainable standards development, certification and claims validation for commercial and consumer products as well as process verification services such as greenhouse gas and landfill-free verification and sustainable forestry and e-waste certification.



NSF Standards Development for Sustainability



**NSF International's
National Center for
Sustainability Standards**





**Goal for Sustainability:
Create leadership standards that is
relevant in the marketplace.**





Awareness & Coordination | Continuous Improvement | Industry Practice Advancement



The NSF National Center for Sustainability Standards (NCSS) offers a single source for information exchange between sustainability experts and industry professionals – *standardizing sustainable practices.*



www.nsf sustainability.org

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Current Project Highlights

- **NSF 426: Sustainable Server Standard**
 - Standard for blade, rack, pedestal, and node servers (data centers)
 - Final publication will be listed on the EPEAT registry
- **NSF 391.1: Sustainable Professional Services**
 - Standard for professional services
 - Final publication will be supported by EPA & GSA

New Projects

- **Standard for Sustainable Solar Panels**
 - Launching in or 4th quarter of 2015



Product Category Rules (PCR)

- **NSF is ANSI accredited to develop PCRs**
- **Services include:**
 - PCR development
 - PCR addendums for global harmonization
 - EPD and LCA verification services
 - Webinars and Training
- **Current PCR Projects:**
 - Architectural Coatings (*published*)
 - Hand Sanitizers
 - Office Furniture Systems (*published*)



Sustainable Product Standards

Published:

- ANSI/BIFMA e3 Furniture
- NSF/ANSI140 Carpet
- NSF/ANSI 332 Resilient floor coverings
- NSF/ANSI 336 Commercial furnishing fabric
- NSF/ANSI 342 Wallcovering products
- NSF/ANSI 347 Single ply roofing membranes
- ANSI/NSC 373 Dimension Stone
- NSF/ANSI/AWWA 416 Sustainable Water Treatment Chemicals

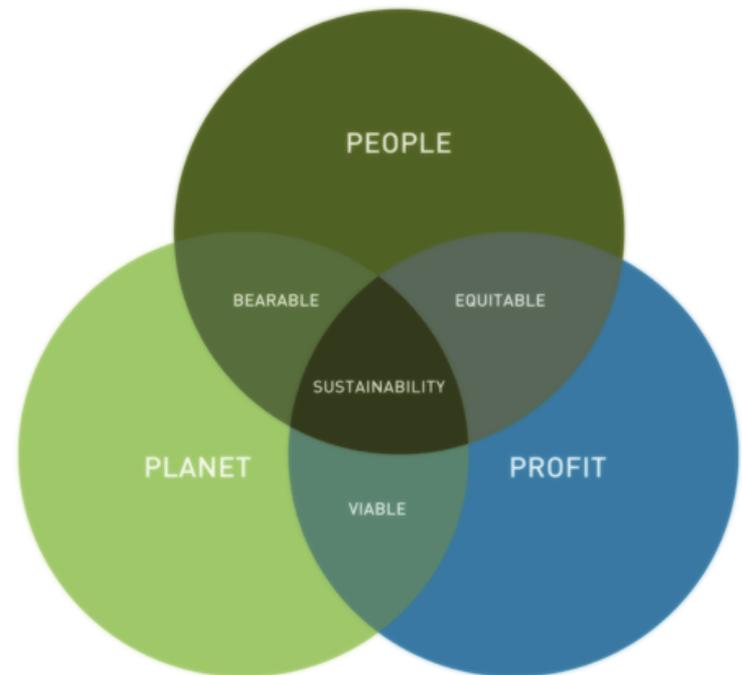
In Development:

- NSF/ANSI/AWWA 375 Sustainable Water Contact Products
- NSF 426 Environmental Leadership Standard for Servers



Sustainability Standards Content

- Product Design
- Product Manufacturing
- Long-Term Value
- Corporate Governance
- End of Life Management
- Innovation



Product Design

- Environmental considerations in Design
- Life Cycle Assessments
- Material Selection
- Environmentally Sustainable Material Inputs
- Chemicals of Concern
- Recyclability of Packaging Materials

Product Manufacturing

- Environmental Policy
- Energy Use and Efficiency
- Water Use and Conservation
- Greenhouse Gas (GHG) Inventory & Reduction
- Waste
- Environmental Management Systems



Long-Term Value

- Product Durability
- Indoor Air Quality
- Recommended Usage
- Green Cleaning



End of Life Management

- Product Recyclability
- Post-Consumer Collections
- Investment in Reclamation Programs



Innovation

- Development of new technologies that result in innovative performance.
- Exceptional performance above the requirements set in the Standard.



Tiered Performance

- Common template of “credits” earned toward a minimum threshold of performance.
 - Level 1/Conformant
 - Level 2/Silver
 - Level 3/Gold
 - Level 4/Platinum



Platinum Certified
NSF/ANSI 140
Sustainable Carpet



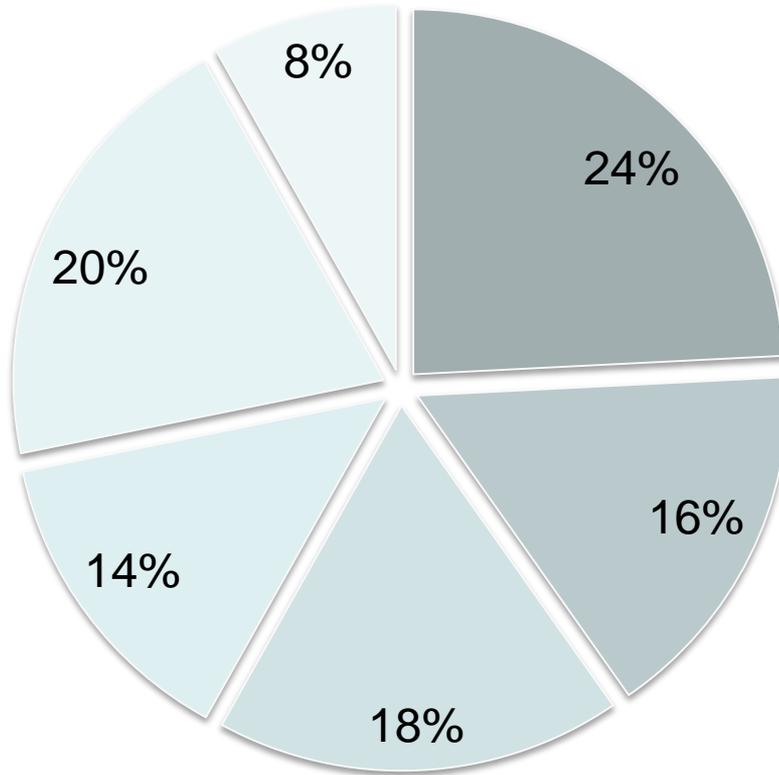
Certification Process Flow



NSF/ANSI 140 and ANSI/BIFMA e3 Overview



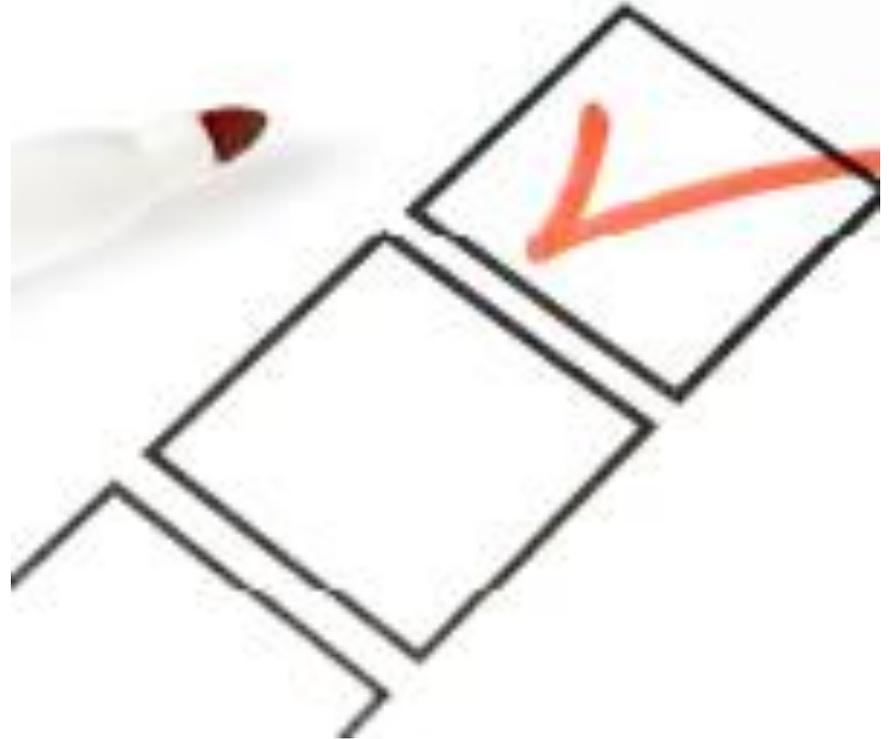
NSF/ANSI 140 Sustainability Assessment for Carpet



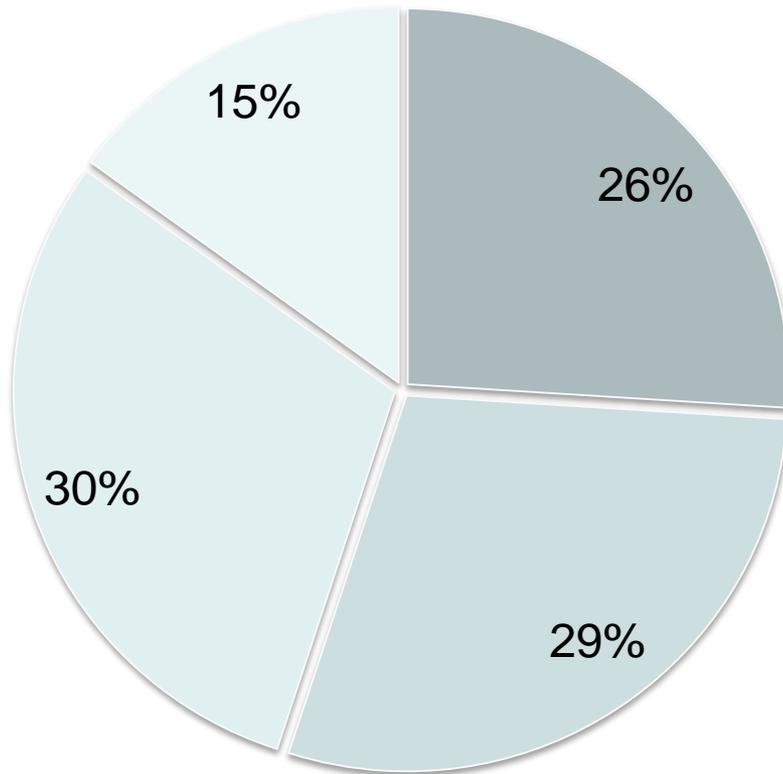
- Public Health and Environment (30 Points)
- Energy and Energy Efficiency (20 Points)
- Materials (22 Points)
- Manufacturing (17 Points)
- End of Life (25 Points)
- Innovation (10 Points)

NSF/ANSI 140 Sustainability Assessment for Carpet Acceptance

- NSF 140 Gold Certification is required by 13 States
- GSA Schedule 72
- Colleges & Universities
- Green Globes
- IgCC
- Potential LEED Credits



ANSI/BIFMA e3 Furniture Sustainability Standard



- Materials (26 points)
- Energy and Atmosphere (25 points)
- Human and Ecosystem Health (30 points)
- Social Responsibility (10 points)

ANSI/BIFMA e3 Furniture Sustainability Standard Acceptance

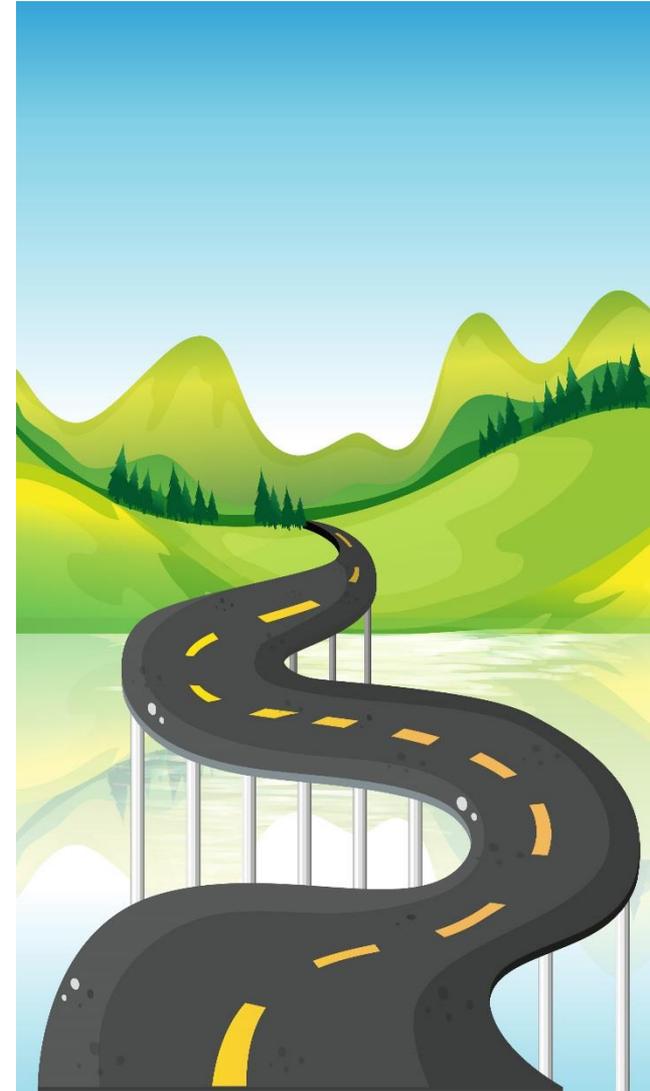
- LEED Pilot Credit 80
- Green Globes
- IgCC
- Air Force
- EPA
- Homeland Security
- Navy
- States: Florida & Georgia
- Canada



Path Forward: ANSI/BIFMA e3

Proposed New ANSI/BIFMA e3 Structure

- Sec. 5.0 ENVIRONMENTAL IMPACTS
 - 5.1 Product Design and Material Sourcing
 - 5.2 Manufacture and Transport
 - 5.3 End-of-Use
- 6.0 HEALTH AND WELLNESS IMPACTS
 - 6.1 Manufacture and Supply Chain
 - 6.2 Product Use
- 7.0 SOCIAL IMPACTS
 - 7.1 Social Responsibility
 - 7.2 Corporate Governance



EPA Ecolabel Pilot Program

- **Draft Guidelines for Assessing Environmental Performance Standards and Ecolabels for Federal Purchasing**
 - Guidelines for the Process for Developing Standards
 - Guidelines for the Environmental Effectiveness of the Standards
 - Guidelines for Conformity Assessment
 - Guidelines for Management of Ecolabeling Programs
- **Pilot Program**
 - 1) Paints, Coatings, and Removers
 - 2) Flooring
 - 3) Furniture



Ways to Start on a Path Towards Sustainability

- Create an environmental assessment program within the product design and development system and set goals for your company
- Material Inventory
 - Chemicals of concern
 - Environmental content
- Start to track environmental metrics
 - Energy
 - Water
 - Waste
 - Greenhouse Gas
- Start to track social metrics
 - Discrimination, Forced Labor, Child Labor, Health & Safety
- Supplier Programs



Material Inventory

Material Trade Name	Chemical Name	CAS #	Manufacturer appearing on the MSDS	Percentage of Material in Product	Post-Consumer Recycled Content	Pre-Consumer Recycled Content



Electricity & GHG Tracking

Electric Totals (KWh)	Jan	Feb	Mar	Apr	May	Jun
Year 1: 2008	811,451	838,508	842,125	707,584	794,111	445,255
Year 2: 2009	842,125	706,584	798,361	707,584	686,123	614,424
Year 3: 2010	786,103	784,424	618,235	542,272	736,115	405,252
Natural Gas Totals (BTU)	Jan	Feb	Mar	Apr	May	Jun
Year 1: 2008	940,032	760,112	758,417	617,147	555,012	322,157
Year 2: 2009	822,167	242,123	189,746	842,121	727,584	794,191
Year 3: 2010	827,741	312,456	589,709	605,569	617,147	555,012

Unit: Metric tons CO2 equivalent	Jan	Feb	Mar
Year 1: 2008			
Carbon Dioxide (CO ₂)	85	78	77
Methane (CH ₄)	12	25	62
Nitrous Oxide (N ₂ O)	11	14	58
Hydrofluorocarbons (HFCs)	8	35	25
Perfluorocarbons (PFCs)	9	5	87
Sulfur Hexafluoride (SF ₆)	18	35	44



Supplier Questionnaires

- **Compliance with Local, State, and Federal Regulations**
 - Including any outstanding violations
- **Compliance with Environmental and Labor Regulations**
 - Including any outstanding violations
- **Environmental Management System**
 - Tracking of metrics like energy, GHG, water, waste
 - Use of Renewable Energy
- **Prohibitions on Forced Labor and Child Labor**
- **Prevention of Discrimination**
- **Health & Safety Programs for Employees**



Understanding Your Company's Impact

Normalize the data by production volume or sales for a more meaningful and accurate perspective

Set a baseline to measure success

Visualize the data with charts

Use the data to set goals for improvements

Share your story with your customers!

Steelcase

- **Continued focus on product development**
- **Continued focus on operations**
- **Positive impacts from working with supply chain**
 - Energy inventories & reduction
 - Water inventories & reductions
 - Chemical Management
- **Provides a structured approach and tools for a successful outcome**
- **Helps develop continuous improvement plans**



J+J | INVISION

- **Sustainability efforts create a better company and better product**
- **20/20 Vision by 2020**
 - Eliminate use of landfills
 - Reduce water usage by 66%
 - Reduce energy by 20% and increase renewable energy to at least 10% of total energy
 - Reduce GHG emissions by 20%
 - Increase recycled, bio-based, or renewable content in products to 33%



Share Your Sustainability Success Stories



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