Scaling Low Carbon: Market Transformation for Building Products

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Curated by Clay Tilton

Northeast Sustainable Energy Association (NESEA)
March 28, 2023
Introductions

Annie Bevan
CEO, mindful MATERIALS
CEO, SMS Collaborative, LLC

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CEO, BuildingEase, Inc.
Sustainable Performance Institute
WHAT DO YOU HOPE TO GET OUT OF THIS SESSION?
Agenda:

● Introductions & Level Setting
● How do you define a Sustainable Material? (Exercise)
● An overview of mM & The Common Materials Framework
● Making Low Impact Materials a Reality (Exercise)
● Scaling Operational Alignment into your Workflow
● Q&A
shelter: an essential human need
to build/design shelter we need resources
“yeah you just throw it away!”

the disconnect of mindless materials in the built environment
from mindless decisions
from mindless decisions

to mindful materials
What type of info is used for decision making?

Reporting through 3rd Party Standards & Certifications

Compliance with....
600+ sustainability certifications are used in the market today for product and building evaluation

3xN-GxN Guide to Sustainable Building Certifications
How does someone make better decisions?

Challenges in Comparing Diversity of Metrics from Dissimilar Rating Systems
### DISSIMILAR STANDARDS AMONG OWNERS

**VARIABILITY IN CHEMICAL CLASS TARGETS**

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<th>Chemical Class</th>
<th>Owner A</th>
<th>Owner B</th>
<th>Owner C</th>
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<tr>
<td>Alkylphenols</td>
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THE CURRENT MODEL

- Different Criteria & Standards = Different Asks
- Responding to each RFI individually and manually
More Action
*without Alignment*
Yields More Confusion
Need for a Common Language

So what do you mean when you say “healthy”…?
Aligned Action = Momentum
In small groups (3 people) quickly brainstorm how YOU would categorize and define what makes a product “sustainable”

You will have 10 minutes, so don’t focus on or debate one aspect – rather challenge yourselves to quickly list what matters!

(if a product manufacturer asked you what would make their product sustainable – what would you tell them?)
mM & the common materials framework
A Unifying Force

Think of mindful MATERIALS as the UN of Sustainable Materials, bringing people, certifications, standards pledges, organizations, and workflows together to build common ground and alignment.

All so that we can scale the manufacture and use of sustainable materials further, faster, together.

- Resources
- Events + Education
- Forums + Volunteers
- Partnerships
Minding the Gap

Material sustainability is often considered the most complicated and time-consuming part of many green building certifications — and those projects are often the only time that materials strategy is taken seriously. Material embodied impacts remain too easy to ignore, and too complicated to confidently make decisions.

Working in siloes has produced different definitions, data sets and demand signals, widening gap between the leaders and the rest of the industry. The result? More confusion, and less adoption and impact.

That’s why the industry needs a neutral space to convene, learn, and build a common language and aligned foundation.
Closing the Gap

Our opportunity is to make this work accessible, by bringing together strategic partners and community members, simplifying the ask, aligning systems and leveraging education and advocacy.

We’re working to close the gap, so this work can scale.
Strategy Overview

Mindful MATERIALS harnesses collective demand to build scalable solutions to our shared material sustainability challenges.

Focus
The embodied impacts of building materials are multi-faceted, interconnected and global. We elevate the importance of holistic materials sustainability for every product and every project.

Convene
Market shift doesn’t happen in a vacuum. We provide a neutral space (certification-agnostic) that assembles cross-functional expertise to understand and solve problems, together.

Unify
Energy in a lot of different directions yields no momentum. We build + translate common ground into a clear market signal so that our work drives aligned action and meaningful change.

Scale
There are very practical limitations to growth. We’re working to activate, translate, and connect data flows using a common framework to help you make more informed decisions about materials everywhere you work.
What We are Doing

Aligned Roadmap
Aligning industry purchasing powers via a unified language to drive clear demand for sustainable products

Clearer, Better Data
Bringing new clarity and value to third party standards, rapidly scaling the availability of quality sustainability data via third party standards adoption.

Engaged Community
Fostering a community of diverse stakeholders with the knowledge to demand and enable materials action.

MARKET SHIFT
Eventually, you’ll use the mM Common Materials Framework (CMF) every day to make decisions — but you might never know it’s there. It’s designed to live behind the scenes in your favorite workflow tool(s), organizing, aligning and connecting data.

Scoring projects for their material impacts is the future — but it doesn’t work without a solid foundation.

The mM CMF enables the advanced functionality employed by procurement tools, ESG systems, product databases.

We don’t set the metrics. We make them possible.
CMF: A Common Materials Language

The Common Materials Framework (CMF) is the outcome of the most detailed cross-stakeholder industry effort to date to analyze and contextualize over 100 of the most common building product and material certifications and disclosures.

The framework gives structure to over 650 data ‘factors’ identified within these programs relevant to material sustainability, organizing them within 5 ‘buckets’ of health and sustainability, thus defining the broad categories first identified in the AIA A&D Materials Pledge. This framework gives us a ‘common language’ that can be adopted by anyone or any platform, to understand and demonstrate the embodied impacts of products.
Together Mapping the Materials Landscape

CONTENT ADVISORY BOARD (CAB)

CONTENT WORKING GROUP (CWG)

ECOSYSTEM PARTNERS
Developing the Common Materials Framework (CMF)

Buckets and Sub-buckets

**HUMAN HEALTH**
- Substances
- VOCs
  - Company Human Health Impacts

**CLIMATE HEALTH**
- Embodied Carbon
- Company Carbon

**Ecosystem Health**
- Pollution
- Product Water Footprint
- Company Water Footprint
- Biodiversity & Conservation
- Life Cycle Env. Impacts

**Social Health & Equity**
- Company Workplace
- Supply Chain
- Community

**Circular Economy**
- Sourcing
- End-of-Life
- Packaging
- Waste
- Company Circularity
Common Materials Framework (CMF) Structure

**Buckets**
The 5 major buckets, as aligned by industry pledges

**Sub-Buckets**
Each bucket includes sub-buckets to further differentiate impact areas

**TACO Structure**
Each sub-bucket then has 4 sections, **Transparency**, **Assessment**, **Commitments**, and **Optimization** (TACO)

**Factors & Sub-Factors**
Within each section are the specific factors and sub-factors that are relevant to the type of evaluation
## Identifying the Major Standards Relevant to each Impact Area

<table>
<thead>
<tr>
<th>A&amp;D Materials Pledge Bucket Description</th>
<th>CMF Sub-Buckets</th>
<th>Some Contributing Programs + Standards</th>
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</thead>
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<td>support HUMAN HEALTH by preferring products that support and foster life throughout their life cycles and seek to eliminate the use of hazardous substances.</td>
<td>substances</td>
<td>HPD, Declare, C2C, BIFMA, LPC, GreenCircle CEF</td>
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<tr>
<td></td>
<td>VOCs</td>
<td>CDPH, SCS Indoor Advantage, GreenGuard, BIFMA, SCAQMD</td>
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<tr>
<td></td>
<td>Company human health impacts</td>
<td>Chemical Footprint Project, Living Product Challenge, BIFMA, C2C</td>
</tr>
<tr>
<td>support CLIMATE HEALTH by preferring products that reduce carbon emissions and sequester more carbon than emitted.</td>
<td>embodied carbon</td>
<td>LCA, EPD, EC3, LPC, GreenCircle CEF</td>
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<td></td>
<td>company carbon</td>
<td>SBTi, CDP, GRI, GreenCircle Carbon Footprint Reduction, GreenCircle CEF</td>
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<tr>
<td>support ECOSYSTEM HEALTH by preferring products that support and regenerate the natural air, water, and biological cycles of life through thoughtful supply chain management and restorative company practices.</td>
<td>pollution</td>
<td>BIFMA, C2C</td>
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<td>Water footprint (product)</td>
<td>LPC, C2C, BIFMA, GreenCircle CEF, WaterSense</td>
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<td>Water footprint (company)</td>
<td>Global Water Footprint Assessment Standard, Alliance for Water Stewardship, CDP, GRI, B-Corp</td>
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<td></td>
<td>Biodiversity &amp; conservation</td>
<td>LPC, C2C, SCS Environmentally Preferable Product Certified, FSC, SFI, BIFMA</td>
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<tr>
<td></td>
<td>Life cycle environm. impacts</td>
<td>LCA, EPD, TRACI (US EPA)</td>
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<tr>
<td>support SOCIAL HEALTH &amp; EQUITY by preferring products from manufacturers that secure human rights in their operations and in their supply chains, positively impacting workers and communities where they operate</td>
<td>Supply chain</td>
<td>ILO, FSC, C2C, LPC, Copper Mark, PEFC, Design for Freedom</td>
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<td>Company workplace</td>
<td>JUST, B-Corp, UN Global Compact, C2C, LPC, BIFMA</td>
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<tr>
<td></td>
<td>Community</td>
<td>BIFMA, JUST, FSC Certified, Certified B-Corp, LPC</td>
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<tr>
<td>support a CIRCULAR ECONOMY by reusing and improving buildings and by designing for resiliency, adaptability, disassembly, and reuse, aspiring to a zero-waste goal for global construction activities.</td>
<td>sourcing</td>
<td>FSC, SFI, USDA Biobased, ANSI 373 Sustainable Stone, C2C, LPC, BIFMA, Ecologo, GreenCircle, SCS Verifications</td>
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<td>End of life</td>
<td>C2C, LPC, GreenCircle Closed Loop Product Certification, UL claims, SCS claims</td>
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<td>waste</td>
<td>TRUE Certified, LPC, BIFMA, SCS Zero Waste, NSF Landfill-free, GreenCircle Zero Waste</td>
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Across 5 Buckets
600+ Factors from 150+ Standards

This is the common language.
Mapping Certifications & Reporting Data to Factors

HUMAN HEALTH

Substances

Transparency

Reporting Threshold

100 ppm

1,000 ppm

10,000 ppm

Percent Disclosed

<95%

95%

99%

100%

Declared

LBC Compliant

Red List Free

Bronze

Silver

Gold

Platinum
Certifications & Data are Framed in Common Context
Beta Portal is now live!
Future Flow State

Translation through the Common Materials Framework

Portal powered by toxnot

150+ Standards & Certifications

150+ Standards & Certifications

BuildingEase

cove.tool

Rheaply

Deltek

Material Bank

2050 2050 materials

Owner and A&D Specific Tools
“The Coolest Sandbox for Everyone to Collaborate on holistically sustainable building materials”
THE CURRENT ARCHAIC MODEL
Data is reported to a common source for all

Reduces coordination and management for all

Centralized Data Reporting
ALIGNMENT ON STANDARDS

- Common ask, common give
Value Proposition of Alignment

**Clear Targets**
Consistent goals and language

**Streamlined Reporting**
Connected data eliminates redundancies, and inefficiencies

**Broader Industry Adoption**
A market that rewards healthy & sustainable products
Let's make mindful the norm, not the option.

Find out how you can help us achieve our strategic goals, and how they help you to meet yours at mindfulmaterials.com
SCALING ADOPTION
A common language is a critical 1st step, enabling unified action.

AND....

It takes more than that...think about your firms and what it takes to do (anything) consistently..think about the process from design into construction...

There are a lot of parts to this puzzle to truly SCALE
WHAT DOES IT TAKE TO “SCALE” ADOPTION?
EXERCISE
WHAT DOES IT TAKE TO “SCALE” ADOPTION?

What does it take to make low carbon, healthy, just products the norm?

In groups of 3, identify the specific things that need to happen (or be put in place) to ensure that the best products are identified, selected and installed in projects consistently so that we transform the marketplace consistently so that we transform the marketplace.

Consider all scales:
- What needs to change within your practice?
- What needs to happen within your project teams?
- What needs to happen across the supply chain?
FRACTAL TRANSFORMATION REQUIRES ENGAGING AT ALL SCALES
CONNECTING THE DOTS FROM DESIGN THRU PROCUREMENT FOR MATERIALS

We make it easy to do the right thing!

FREE tool to operationalize good decisions into workflow
The BuildingEase Solution =
A completely free tool to use!

WORKFLOW OPTIMIZATION
Internal & team efficiency

MARKETPLACE
Procurement Aggregation
Global "Buyer’s Club"

BE-Xchange
Reuse & Salvage
(a 'not-waste' exchange)
WITHIN YOUR COMPANY:

"GETTING YOUR HOUSE IN ORDER"
WHAT DOES IT LOOK LIKE?

Consistent compliance across all projects
Internally-driven standards
Knowledge mngmt / lessons shared
Data tracking + analysis = cont improve.
The Current Situation: it’s a hot mess...

In most large orgs, teams repeat the same research and don’t have time to share information....
HOW MANY HOURS HAS YOUR FIRM LOST BY NOT SHARING RESEARCH, KNOWLEDGE, LESSONS LEARNED?

(answer: you don’t know because you don’t track those invisible losses…)}
BuildingEase's Material Tracking tool

- 2 clicks to copy and share a material list from one project to the next.
- Organize complete lists of materials in 3 ways: alphabetically, by project type and by client.
- Sustainability standards automatically embedded and complied with whether known or not!
- Lessons learned automatically shared.
- No need to repeat research from team to team for the same project type or same product type. Time spent on better things!
- Save time, improve quality.
MATERIAL LIST LIBRARY: centralized, curated...

Material List = Outline Spec
Cloud based, centralized for your organization, especially for large orgs.

One admin or multiple
Structure any way you like + view by:
- Alphabetical
- By Client
- By Project Type

Standards embedded across all teams
Compliance - automatic
Global updating
Track and analyze your data
MATERIAL LIST LIBRARY: centralized, curated...

Access Sustainability Data from the Source

Until mindfulMaterials flows to us

We have API connections directly with:
- Declare
- HPD
- EC3
- C2C...etc.

Click and add from there to your project’s Material List
OUR COLLABORATION IS KEY!
WE WANT TO USE OUR SCALE TO "GROW" ENGAGEMENT FOR ALL RESOURCES
Healthy/low carbon Product ECOSYSTEM...

Supply chain & data partners:

BuildingEase.com

workflow / scale engine

not yet green products

mindful MATERIALS

Collaboration hub

[MARKET PRESSURE]

ALL CERTS

Healthy/low carbon Product ECOSYSTEM...

Supply chain & data partners:

toxnot

BRIGHTWORKS SUSTAINABILITY

not yet green products
Every product has fields for lessons learned & discussion threads

Comments and discussion threads between the team members tie to specific products

Every product can be designated as a 1st Choice, 2nd (acceptable alternative) or "BL": BLOCKLIST, part of how we block unwanted substitutions!

‘Product Notes’ travel with each list when you copy from one project to a new one. ‘Project Notes’ do not get copied – they are specific to a project!

All coordination information is centralized and shared easily!
CREATE INTERNAL STANDARDS + AUTOMATIC COMPLIANCE
Create organization-wide standards more easily, based on CMF

Once you create a standard in your organization, EVERY team that uses it automatically complies (without even knowing it). Owner’s – you can onboard teams to your standards easily and ensure consistent on every project.
Centralized Material Tracking

Makes consistency easy...

(especially if you can’t educate everyone all at once…)

Everyone complies to your internal standards, whether they are educated or not, whether they care or not! Automatically!
CREATE INTERNAL STANDARDS
...and get automatic compliance!

Standard-setting is quick and flexible.

Standards can be **company-wide**, **project type specific**, or however you want to configure them!

Global updates (over time) are easy.

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**Step 1:** Determine the scope of your standard (you can have more than 1)

**Step 2:** With applicable CSI sections *in mind* (and/or generic name, like Carpet Tile) you select your criteria that define this standard.

**Step 3:** Final step is to match the criteria to the CSI Division you set.
CONTINUE COMPLIANCE

in coordination with

EXTERNAL PROJECT TEAMS
1st 2nd + Blocklist function: no substitutions...

BLOCKLIST
You can designate any product in 3 ways: as 1st choice or 2nd (acceptable alternative) or Blocklist (Do Not Substitute!).

We encourage you to choose acceptable alternatives for as many products as possible so that the GC / Subs can see that info from the start. GCs can invite subs to bid from here, and subs see 1st 2nd and BL info IN their invite from day 1 – unwanted substitutions are blocked!
We’ve built “Procore-lite” into the platform, so coordinating within the Material Tracker includes coordinating with consultants and GC through project closeout.

- Product information
- Acceptable alternatives & Blocklisted items
- Warranty information
- Lead times
- Logistics
- Coordination (submittals, change orders, unit cost, ratings, and more)
- Sustainability data & certifications

All eyes on the same cloud-based information
All changes immediately seen
Any issues are immediately shared & resolved
“GROUP” function saves time... export schedules or translate a product list from a 300-section architectural spec into...

The GC’s 30 trade packages, with RFI’s, submittal tracking & more. 
Now, just a few clicks

USE ‘GROUP’ FUNCTION TO CREATE SCHEDULES, COORDINATE WITH OTHERS ABOUT COMPATIBILITY...
"Procore-lite": RFI, submittals, change orders
“Procore-lite”: RFI, submittal, change order
"Procore-lite": submittal dashboard

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<td>View Details &gt;</td>
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CROWDSOURCING

Group Genius helps us all!
“Spotify-like Playlists” SAVE US ALL TIME!

Public Crowdsourced Lists on any theme YOU choose. All benefit, like:

- **Lowest Carbon** Products across all CSI divisions
- **Design for Freedom** (DFF) Slavery/forced labor in supply chain
- **Passive House** products
- **Public School 3-equal** products
- **Bio-Based** natural, renewable
- **Innovation**: new products coming to market for pilot (w ratings) (partner with startups, accelerators and global tech supporters)
Crowdsourced info saves us all time...

Search results for: “Show me ALL products approved and installed in LBC and WELL projects” (using up to 2 rating systems)
CROWDSOURCING ALSO HELPS TO DE-RISK NEW TECHNOLOGIES

BY SHARING FEEDBACK FROM OWNERS, CONTRACTORS AND FACILITY MANAGERS WHO ARE THE FRONT-LINE!
ACCELERATING MARKET TRANSFORMATION

Leveraging the power of procurement to move the supply chain faster!
We are building a complete product catalog that will include the new re-launched mindfulMaterials portal AND every other product you can buy ... for two strategic reasons:

We include the **Not-Yet-Green (NYG)** products because...

1. We want every architect using the tool to feel that it’s valuable to them and an entire building can be built from here. **But more importantly...**

2. We can’t influence the N-Y-G stuff unless they are included!!

   **How do we have influence??**

Because this is not just a database. It’s a **MARKETPLACE**. We are leveraging the POWER of PROCUREMENT to accelerate change.
MEANWHILE…

Taylor is designing a dormitory (or campus center or…)

MEANWHILE…

The GC is having the subs buy out the project—individually…

Now imagine if you could capture volume discounts from ALL dormitory projects in a city, state or across the US at once…
GLOBAL AGGREGATION

1st GPO Procurement Across All Market Segments

- No cost
- No minimum
- No membership
- All upside
- Up to 30% cost savings
- V.E. cuts for cost? Ha!
- Owners can require it
- Arch.’s can direct GCs to use it
- GCs are starting to use on their own!
- You will drive change in the industry while saving costs!

Now combine your projects with ALL bldg. types!!
WE USE MARKET FORCES TO ACCELERATE MARKET TRANSFORMATION

Using the power of money to drive change....

“You lost $27m in sales this week because you don’t have the [EPD, HPD, Declare, etc] required by project teams”

“What??!!! Where do I start?!! How fast can I get those?”
Actual sales analytics not just specs...

Product manufacturers and Reps get actual sales data & competitive intel.

Find out what certifications are most in demand.

Spend less time on repeat ‘selling’ within each firm!
BUT IT’S NOT ALL SERIOUS WORK....
WE ALSO LIKE TO HAVE FUN!!

BuildingEase Community Programs
Hackathons * Integrated Exhibits * Innovation Exchange
TOGETHER, WE CAN MAKE IT HAPPEN!
BuildingEase.com

BE Faster

BE Smarter

BE Greener

BE More Profitable

THANK YOU!

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