



**a model for transmitting information about
hazard and chemical composition along
the supply chain**



EDEN BRUKMAN
01 NOV 2016



packaging

acoustics

local economy

aesthetics

raw material sourcing

design

embodied water

first costs

manufacturing processes

reuse

functionality

code

installation

appropriate durability

embodied carbon

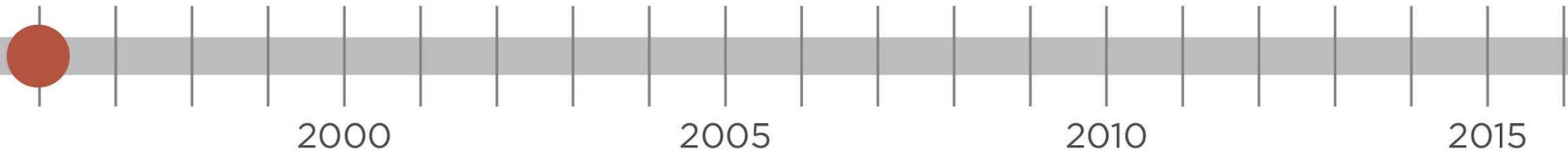
fire resistance

maintenance

health



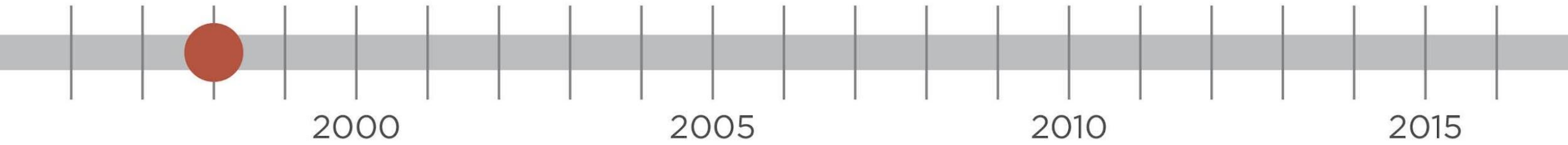
A PRODUCT GUIDE



context: milestones towards transparency for the building materials ecosystem



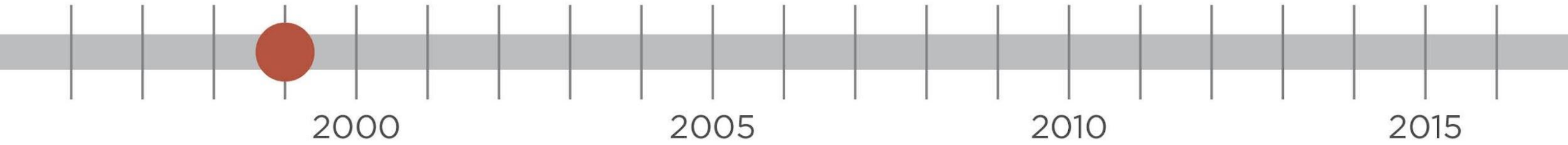
LEED® v1.0
(PILOT)



context: milestones towards transparency for the building materials ecosystem



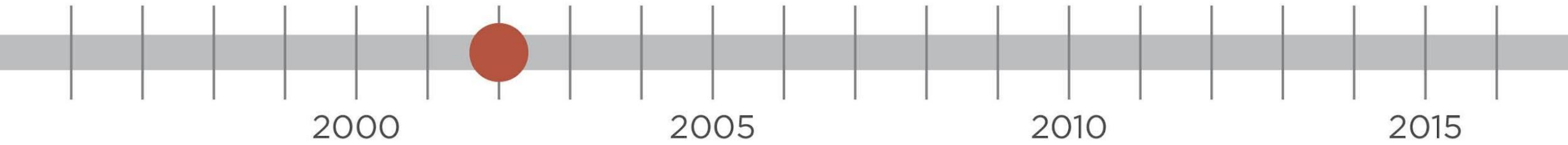
CALIFORNIA SPECIFICATION 01350



context: milestones towards transparency for the building materials ecosystem



GREEN HEALTHCARE CONSTRUCTION GUIDANCE STATEMENT

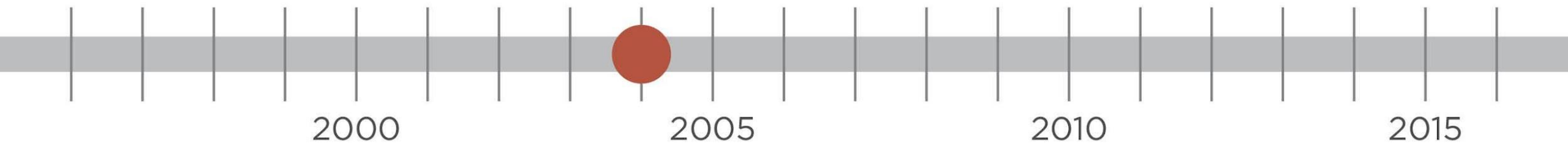


context: milestones towards transparency for the building materials ecosystem

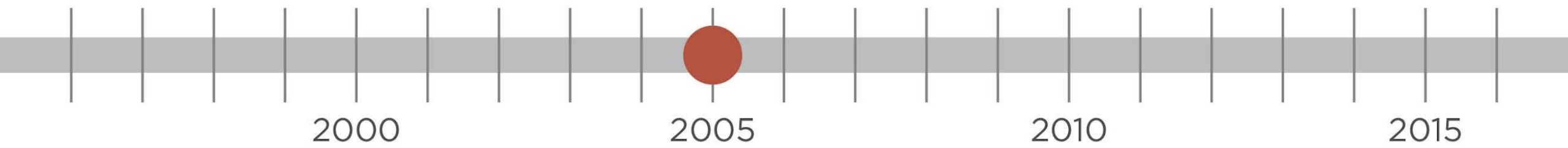
GREEN GUIDE for Health Care™



PILOT PROGRAM



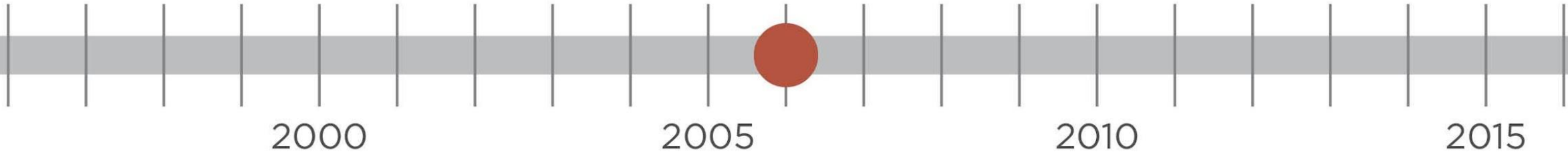
context: milestones towards transparency for the building materials ecosystem



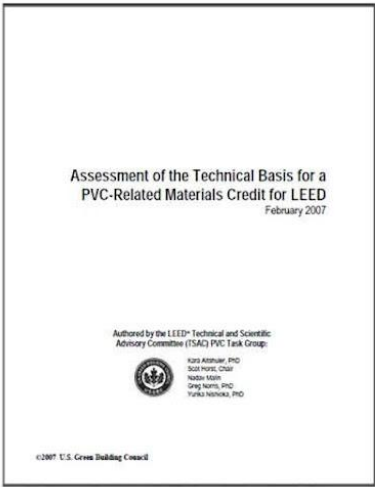
context: milestones towards transparency for the building materials ecosystem



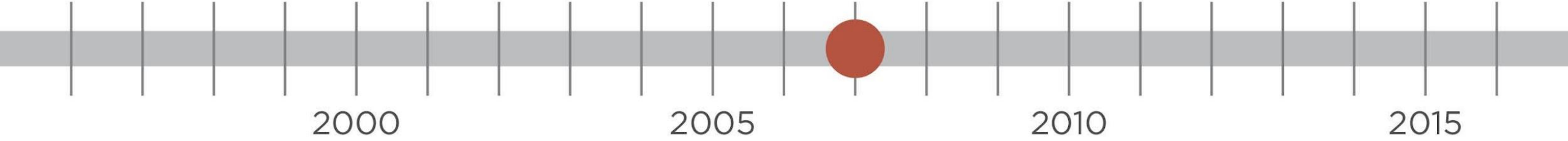
LIVING
BUILDING
CHALLENGE™



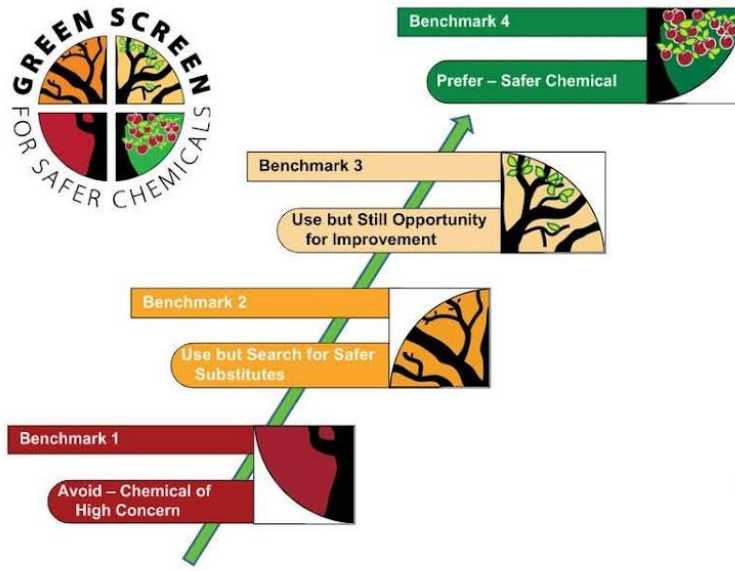
context: milestones towards transparency for the building materials ecosystem



TECHNICAL BASIS FOR PVC-RELATED LEED® CREDIT



context: milestones towards transparency for the building materials ecosystem

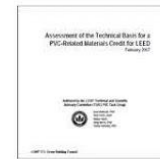


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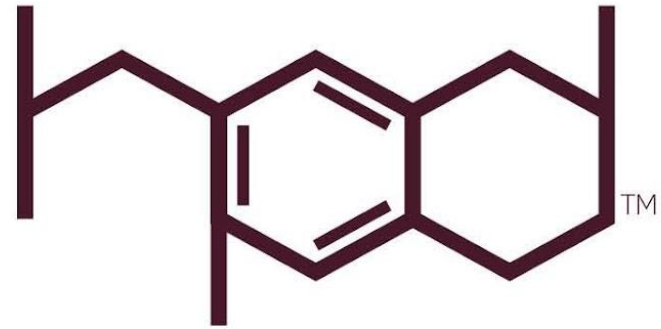
2005

2010

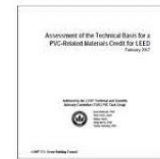
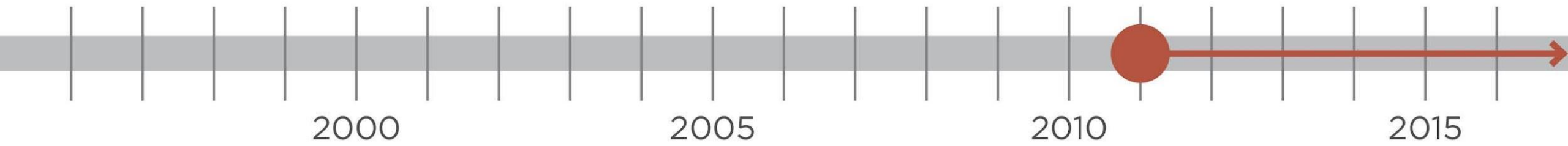
2015



context: milestones towards transparency for the building materials ecosystem



Health Product DECLARATION



context: milestones towards transparency for the building materials ecosystem

50+

leaders from the “green building” movement



30

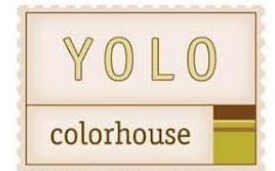
diverse manufacturers



HermanMiller



PROSOCO



top reasons for engaging in cross-sector efforts to account for chemicals of concern:

1. corporate responsibility
2. to promote transparency
3. to have a market advantage

survey of 30 leading building product manufacturers, 2012

biggest difficulties in compiling information for disclosure:

1. extensive data required
2. supplier resistance
lack of information
lack of time
3. internal resistance
4. too many standards

survey of 30 leading building product manufacturers, 2012

roles + skill-sets necessary to compile information for disclosure:

- Technical Engineering
- Procurement
- Environmental, Health and Safety (EHS) / Sustainability / Lifecycle Assessment
- Manufacturing Plant Management or Production
- Research and Development
- Globally Harmonized System of Classification + Labeling Chemicals (for Material Safety Data Sheets)
- Legal
- Sales
- Senior Leadership
- Outside consultants and Suppliers' staff

survey of 30 leading building product manufacturers, 2012

what they enjoyed most about participating in standard creation:

“Having a voice in the process and an opportunity to **learn more about what a segment of the market wants”**

survey of 30 leading building product manufacturers, 2012

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“Gaining **a better understanding** of the contents of our products, the manufacturing process, and potential hazard impacts”

survey of 30 leading building product manufacturers, 2012

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“Gaining **a better understanding** of the contents of our products, the manufacturing process, and potential hazard impacts”

“Helping **make transparency an industry norm** by facilitating this often-difficult transition for manufacturers”

survey of 30 leading building product manufacturers, 2012

what they enjoyed most about participating in standard creation:

“**Having a voice** in the process and an opportunity to **learn more about what a segment of the market wants**”

“Gaining **a better understanding** of the contents of our products, the manufacturing process, and potential hazard impacts”

“Helping **make transparency an industry norm** by facilitating this often-difficult transition for manufacturers”

“Learning that we are actually pretty close to being able to **‘launch’ a new green product offering**”

survey of 30 leading building product manufacturers, 2012

the Health Product DECLARATION is...

- a consistent language for product content reporting
- a transparent and unbiased framework for manufacturers to report material health information
- an essential resource for designers and builders to make informed choices about human and environmental health impacts

Product Name by Manufacturer Name
CLASSIFICATION: 00 00 00
PRODUCT DESCRIPTION: <insert text>

Section 1: Summary

CONTENT INVENTORY
Threshold (per material)
 100 ppm
 1,000 ppm
 Per GHS SDS
 Per OSHA MSDS
 Other

Residuals and contaminants considered in 03 of 04 materials
 see Section 2: Material Notes
 see Section 5: General Notes

** Some content has been characterized, screened, and/or identified by one or more suppliers that provide material to the product.*

CONTENT IN DESCENDING ORDER OF QUANTITY
Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR CONTAMINANT
GREENSCREEN SCORE | HAZARD ENDPOINT [View Key](#)

Based on the selected Content Inventory Threshold:
Characterized... Are the Percent Weight and Role provided for all contents? Yes No
Screened... Are all contents screened using Priority Hazard Lists with results disclosed? Yes No
Identified... Are all contents disclosed by Name (Specific or Generic) and Identifier? Yes No

Number of GreenScreen BM-4/BM-3 contents (towards "green chemistry") ##
Contents highest concern GreenScreen Benchmark or List Translator Score: ##
Nanomaterial: ##

INVENTORY AND SCREENING NOTES
Refer to Section 2 for detailed content information and explanatory notes, and to the last page for HPD scope.

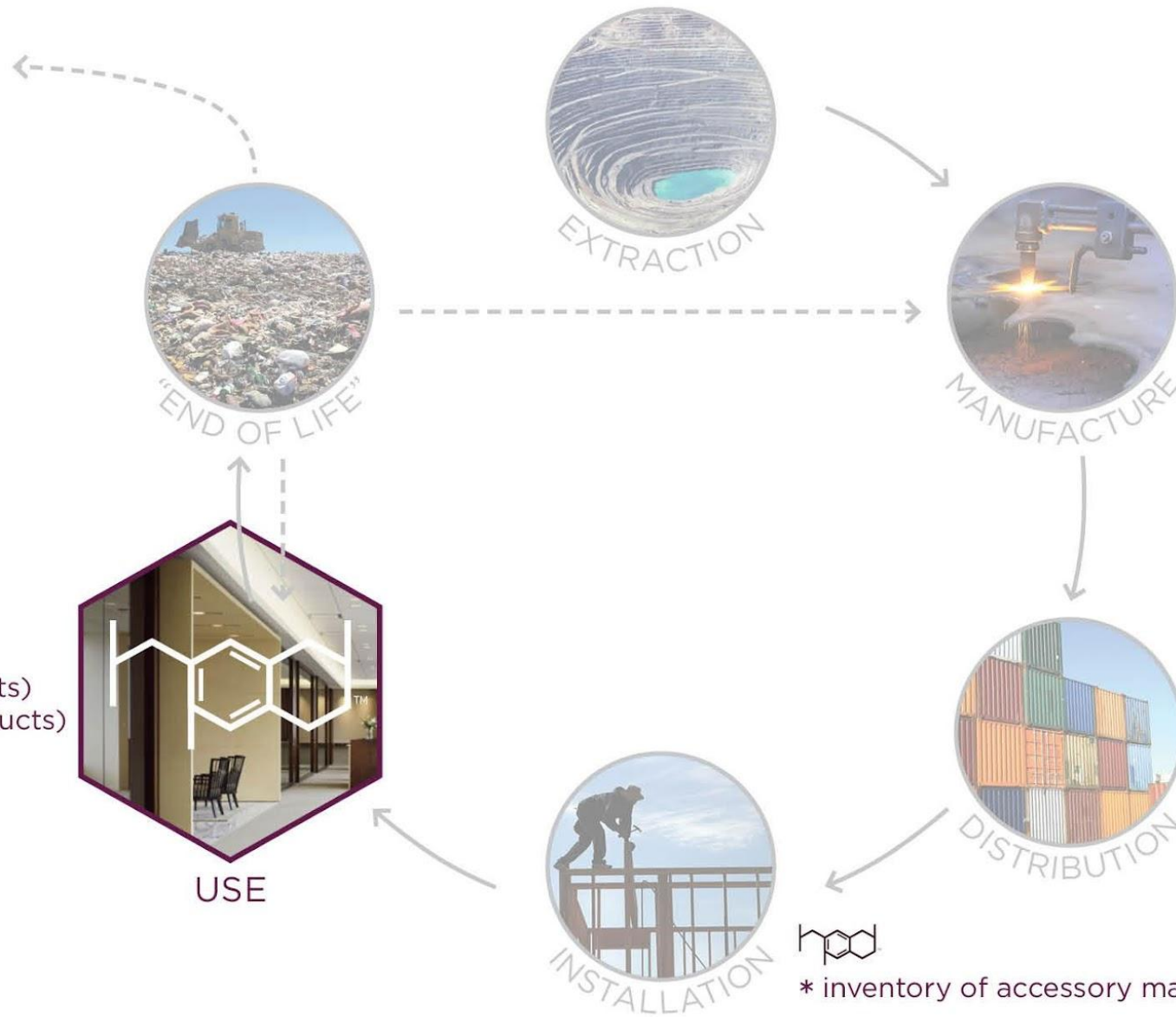
VOLATILE ORGANIC COMPOUND (VOC) CONTENT
Material (g/l):
Regulatory (g/l):
Does the product contain exempt VOCs?
Are VOC-free tints available?

CERTIFICATIONS AND COMPLIANCE
See Section 3 for additional listings.

Product Name by Manufacturer's Name
www.productid.org

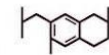
RELEASE DATE: 201#-##-##
EXPIRY DATE*: 201#-##-##
** or within 3 months of significant change in product contents*

Health Product Declaration v2.0
Page X of Y



Safety Data Sheets:
content inventory
and hazards
identification
related to
workplace chemical
management

- Content inventory
- Content screening against Priority Hazard Lists
- VOC emissions (interior products)
- VOC content (wet applied products)
- OPTIONAL: Content/Product exposure data



* inventory of accessory materials

context: product declarations - content inventory + health hazards

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; “Not Found” does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

 [View Key](#)

★ Some content has been characterized, screened, and/or identified by one or more suppliers that provide material to the product manufacturer.

MATERIAL NAME

% : 00

HPD URL: www.linktothetmaterialhpdifoneexists.org

InvThreshold: 1,000 ppm

Residuals/Impurities: Considered or Not Considered

MATERIAL NOTES:

This space includes relevant information about the material and the purpose it serves in the product, and reports any anticipated general variations. This space also includes an explanation about how residuals and contaminants were considered if they are listed in the material inventory, or why they have been excluded. (The Material Name may be Specific, Generic, or ‘Undisclosed’.)

SUBSTANCE NAME

ID: **XXXX-XX-X**

%: 00-00

GS: LT-U

RC: NO

NANO: UNK

ROLE: Whythesubstanceisinthematerial

HAZARDS:

Hazard

AGENCY/IES WITH WARNINGS:

Agency, Warning (auto-populated from Priority Hazard Lists, based on CAS RN)

NOTES:

This space includes relevant information about the chemical substance and the purpose it serves in the material. If the chemical substance can be referred to by multiple CAS numbers, list additional ones here. It may also include references to reports or other published literature about exposure or risk specific to the chemical substance in this material.

section two: Content in Descending Order of Quantity

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; “Not Found” does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

 [View Key](#)

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MATERIAL NAME

% : 00

HPD URL: www.linktothematerialhpdifoneexists.org

InvThreshold: 1,000 ppm

Residuals/Impurities: Considered or Not Considered

MATERIAL NOTES:

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SUBSTANCE NAME

ID: **XXXX-XX-X**

%: 00-00

GS: LT-U

RC: NO

NANO: UNK

ROLE: Whythesubstanceisinthematerial

HAZARDS:

Hazard

AGENCY/IES WITH WARNINGS:

Agency, Warning (auto-populated from Priority Hazard Lists, based on CAS RN)

NOTES:

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section two: Content in Descending Order of Quantity

MATERIAL INFORMATION

- **NAME:** Specific, Generic, Undisclosed
- **%:** of the product by weight (fixed, average, range, Undisclosed, Alternate)
- **HPD URL:** optional
- **Inventory Threshold:** 100 ppm, 1,000 ppm, per GHS SDS, per MSDS, other
- **Residuals/Impurities:** Considered, Not Considered
- **Notes:** references and explanations (nondisclosure, variations, etc...)

section two: Content in Descending Order of Quantity

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; “Not Found” does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

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%: 00-00

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RC: NO

NANO: UNK

ROLE: Whythesubstanceisinthematerial

HAZARDS:

Hazard

AGENCY/IES WITH WARNINGS:

Agency, Warning (auto-populated from Priority Hazard Lists, based on CAS RN)

NOTES:

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section two: Content in Descending Order of Quantity

SUBSTANCE INFORMATION

- **NAME:** Specific, Generic, Undisclosed, Unknown
- **%:** of the material by weight (fixed, average, range, Undisclosed, Alternate)
- **GreenScreen:** Benchmark or List Translator score
- **Recycled Content:** Post-consumer, Pre-consumer, Both, None, Unknown
- **Nanomaterial:** Yes, No, Unknown
- **Role:** purpose or function for inclusion
- **Hazards:** screening results
- **Agency/ies with warnings:** name of Priority Hazard List/s
- **Notes:** references and explanations (nondisclosure, variations, etc...)

section two: Content in Descending Order of Quantity

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 [View Key](#)

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% : 00

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InvThreshold: 1,000 ppm

Residuals/Impurities: Considered or Not Considered

MATERIAL NOTES:

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SUBSTANCE NAME

ID: **XXXX-XX-X**

%: 00-00

GS: LT-U

RC: NO

NANO: UNK

ROLE: Whythesubstanceisinthematerial

HAZARDS:

Hazard

AGENCY/IES WITH WARNINGS:

Agency, Warning (auto-populated from Priority Hazard Lists, based on CAS RN)

NOTES:

This space includes relevant information about the chemical substance and the purpose it serves in the material. If the chemical substance can be referred to by multiple CAS numbers, list additional ones here. It may also include references to reports or other published literature about exposure or risk specific to the chemical substance in this material.

section two: Content in Descending Order of Quantity

- biological material
- ceramics
- defined substance without identifier
- electronics
- float glass
- form specific hazards
- geological material
- material with CAS RN but no specific molecular structure
- metal alloy material
- mixed hardware
- reaction products
- recycled content – mixture

Special Conditions for Materials and Substances

**Manufacturers
Advisory
Panel**

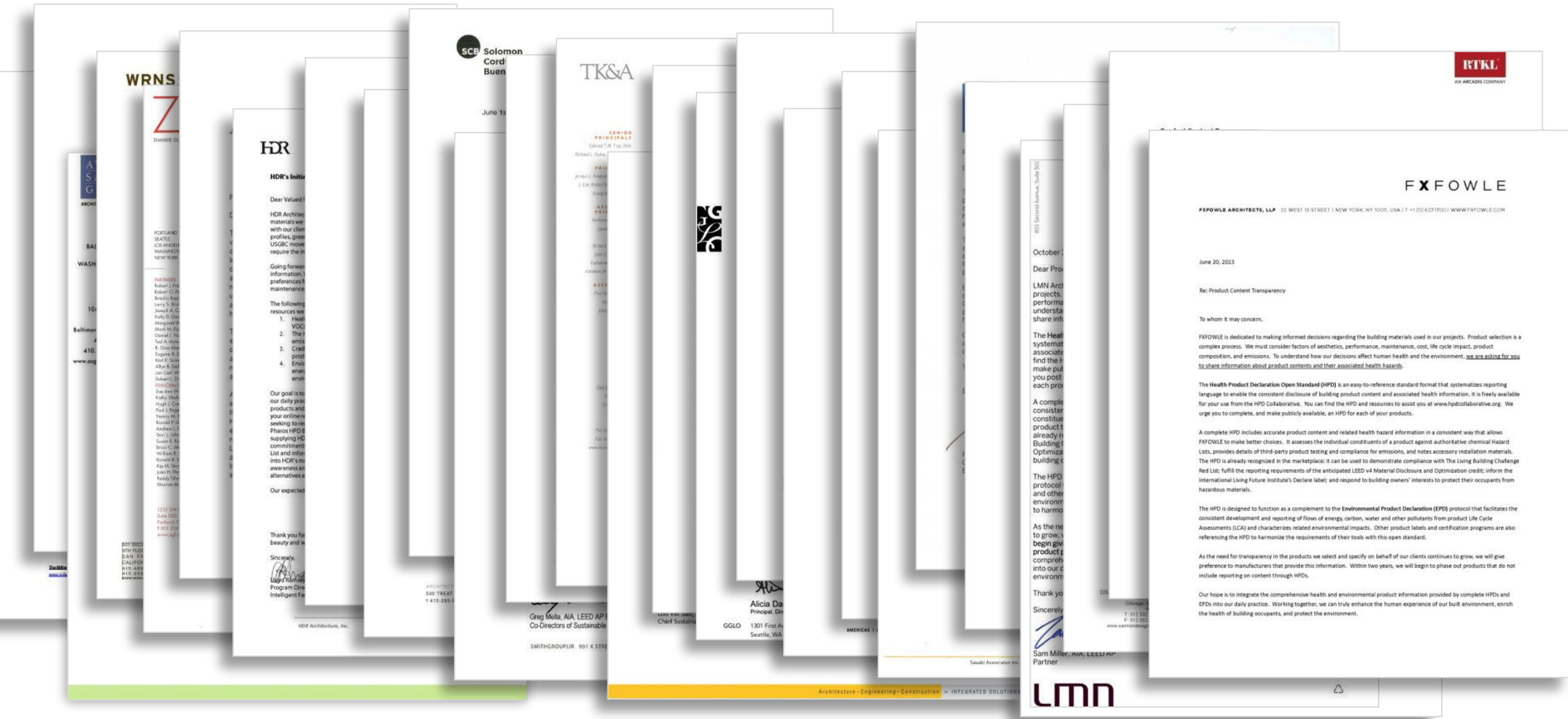
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graph LR; MAP[Manufacturers Advisory Panel] --- WG1[workgroup]; MAP --- WG2[workgroup]; MAP --- WG3[workgroup]; WG1 --- TC[Technical Committee]; WG2 --- TC; WG3 --- TC;
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workgroup

workgroup

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**Technical
Committee**



WRNS

ZIMMER CO.

HDR

HDR's Initi

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Going forward
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The following
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1. Heat VOC
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T 415-285-1

Greg Mella, AIA, LEED AP
Co-Directors of Sustainable

SMITHGROUPJJR 901 K ST SE

TK&A

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Thank yo

Sincerely

Sam Miller, AIA, LEED AP
Partner

LMN

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www.carrollandson

RTKL
AN ARCADIS COMPANY

FX FOWLE

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June 20, 2013

Re: Product Content Transparency

To whom it may concern,

FX FOWLE is dedicated to making informed decisions regarding the building materials used in our projects. Product selection is a complex process. We must consider factors of aesthetics, performance, maintenance, cost, life cycle impact, product composition, and emissions. To understand how our decisions affect human health and the environment, we are asking for you to share information about product contents and their associated health hazards.

The Health Product Declaration Open Standard (HPD) is an easy-to-reference standard format that systematizes reporting language to enable the consistent disclosure of building product content and associated health information. It is freely available for your use from the HPD Collaborative. You can find the HPD and resources to assist you at www.hpdcollaborative.org. We urge you to complete, and make publicly available, an HPD for each of your products.

A complete HPD includes accurate product content and related health hazard information in a consistent way that allows FX FOWLE to make better choices. It assesses the individual constituents of a product against authoritative chemical Hazard Lists, provides details of third-party product testing and compliance for emissions, and notes accessory installation materials. The HPD is already recognized in the marketplace: it can be used to demonstrate compliance with The Living Building Challenge Red List; fulfill the reporting requirements of the anticipated LEED v4 Material Disclosure and Optimization credit; inform the International Living Future Institute's Declare label; and respond to building owners' interests to protect their occupants from hazardous materials.

The HPD is designed to function as a complement to the Environmental Product Declaration (EPD) protocol that facilitates the consistent development and reporting of flows of energy, carbon, water and other pollutants from product Life Cycle Assessments (LCA) and characterizes related environmental impacts. Other product labels and certification programs are also referencing the HPD to harmonize the requirements of their tools with this open standard.

As the need for transparency in the products we select and specify on behalf of our clients continues to grow, we will give preference to manufacturers that provide this information. Within two years, we will begin to phase out products that do not include reporting on content through HPDs.

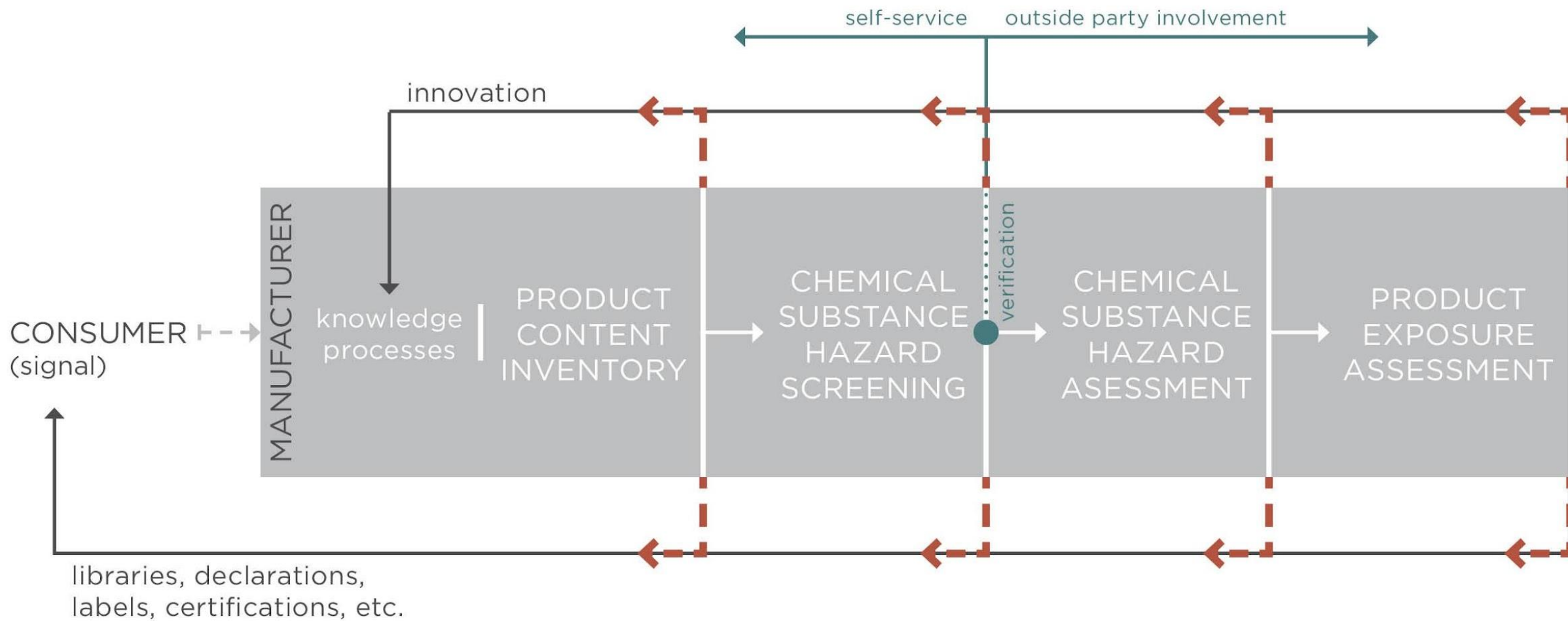
Our hope is to integrate the comprehensive health and environmental product information provided by complete HPDs and EPDs into our daily practice. Working together, we can truly enhance the human experience of our built environment, enrich the health of building occupants, and protect the environment.



advocacy: letters of commitment issued by design firms



advocacy: transparency forums - “reverse lunch-n-learns”



an iterative process

You never change things by
fighting the existing reality.

To change something, build
a new model that makes the
existing model obsolete.

- BUCKMINSTER FULLER