

Sustainability Accounting Standards Board Reporting

How it Intersects with Green Chemistry

November 24, 2017



What is the GC3?

- A cross-sectoral, full value chain business membership organization
- A convener of collaborations to advance green chemistry innovation & practice
- An advocate for government policy & funding that advances green chemistry R&D and innovation

Mission: To make green chemistry standard practice – **Mainstream** - in industry, for innovation, public health, and environmental protection

Started in 2005



Over 100 Members, Including:

Johnson & Johnson

LEVI STRAUSS & CO.

BEHR



SC Johnson
A FAMILY COMPANY

BASF
The Chemical Company



bioamber



Chemours

Beiersdorf



STAPLES



AMYRIS

Unilever

valspar

TARGET

Walmart



CVS Health

DOW

L'ORÉAL

EASTMAN



Timberland



Steelcase

GC3

Today's Speakers

Rich Liroff



Executive Director,
Investor Environmental
Health Network (IEHN)

Henrik Cotran



Sector Analyst,
Sustainability Accounting
Standards Board (SASB)

Ground Rules

- Due to the number of participants in the webinar, all lines will be muted
- If you have a question or comment, please type it in the “Questions” box located in the control panel
- Questions will be answered at the end of the presentation



The Sustainability Accounting Standards Board

SASB Standards and Green Chemistry Reporting

Henrik Cotran
Sector Analyst

November 14, 2017

SASB

The Sustainability Accounting Standards Board (SASB)

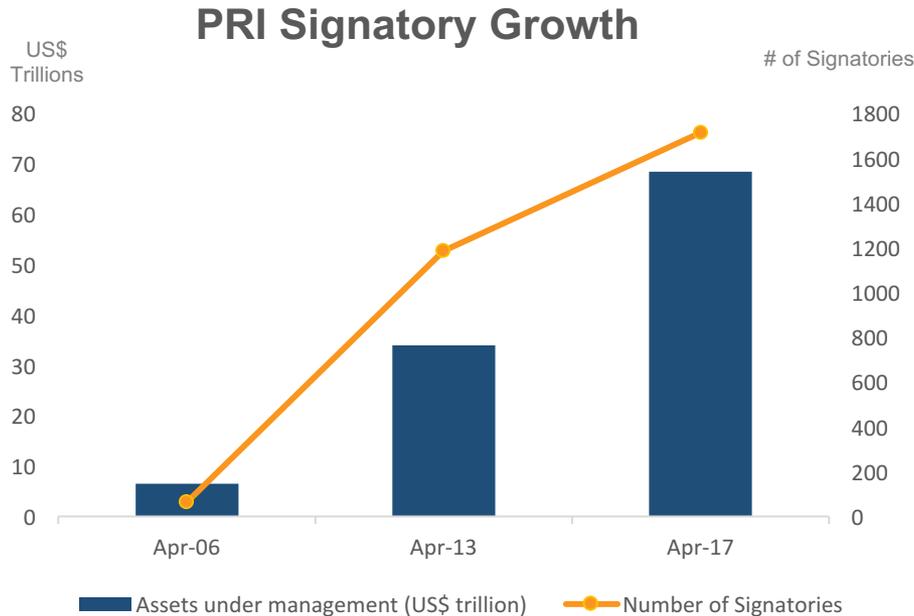
Discussion Topics

- 1 Growing Investor Interest in Sustainability
- 2 **SASB Overview**
- 3 SASB's Standards Development Process
- 4 SASB and Green Chemistry



Investor Focus on Sustainability

A rapidly increasing share of institutional assets are managed with ESG issues in mind



- PRI signatories represent ~50% of total global assets under management
- 90% of the world's top 100 asset managers, including Blackrock, Vanguard, SSGA, Fidelity Investments, Capital Investment Group, and PIMCO
- 359 asset owners, representing USD 16.3 trillion in assets

Source: PRI

All PRI signatories commit to:*

- Incorporate ESG issues into investment analysis and decision-making processes
- Be active owners and incorporate ESG issues into their ownership policies and practices
- Seek appropriate disclosure on ESG issues by the entities in which they invest

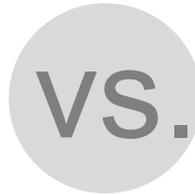
*Reflects only three of six PRI Principles, to which all signatories commit.

Pain Points for Data Users

Investors are dissatisfied with the quality of ESG disclosure

Investor Needs

Investor confidence in the quality of the ESG information received from issuers



Issuer Reporting

Issuer confidence in the quality of the ESG information reported



Source: PwC, *ESG Pulse*, 2016.

High degree of investor dissatisfaction with the current state of ESG disclosure

% Investors Dissatisfied

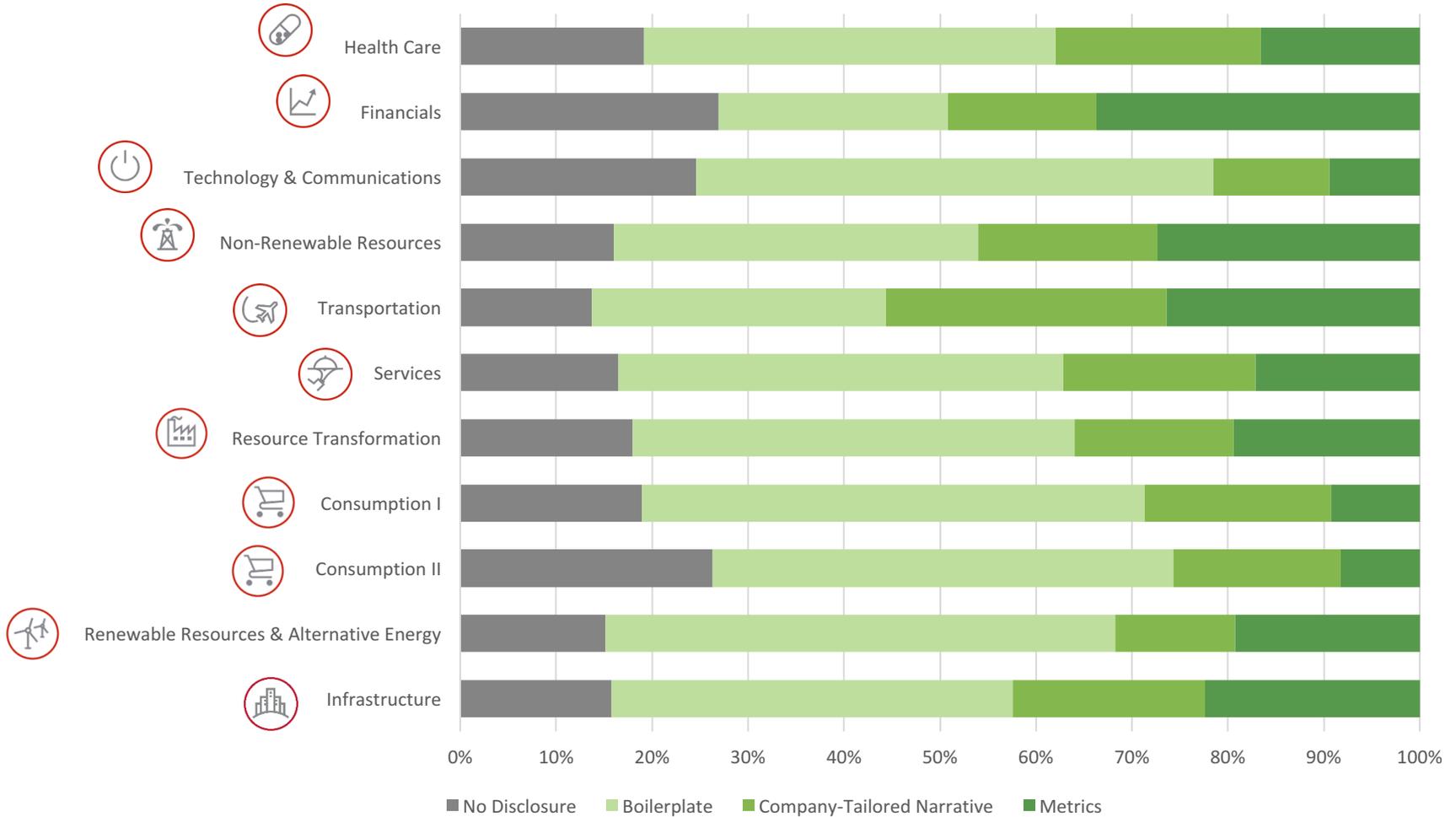
Disclosure of ESG-related risk/opportunity that could affect business models	93%
How sustainability risks/opportunities are identified and quantified in financial terms	82%
Ease of comparing peer companies based on ESG data disclosed	92%
Key performance indicators related to each identified material issue	68%
Use of standards for disclosure of ESG data to investors (50% want industry-specific)	71%

Sources: EY, *Is your non-financial performance revealing the true value of your business*, 2017; PwC, *Sustainability Goes Mainstream*, May 2014; *ESG Pulse*, 2016.

Current State of Disclosure on SASB Topics

Opportunity to transform SEC disclosure from boilerplate to performance-based

State of Disclosure in Annual SEC Filings



Source: SASB analysis performed between May and August 2016 using the latest annual SEC Filings (i.e. Form 10-Ks and 20-Fs) for the top companies, by revenue, per SICS industry (maximum of 10 companies).



SASB Overview

Industry-specific standards to guide disclosure of material ESG factors to investors

The SASB creates industry-specific sustainability accounting standards.

SASB standards:

- Help companies disclose financially material, decision-useful ESG information to investors in a cost-effective way
- Reduce information asymmetry
- Enable performance benchmarking across companies
- Facilitate more accurate pricing of risk



Facts about SASB

- Independent standards setter led by nine-member standards board
- Follows rigorous, evidence-based, market-informed process
- Maintains industry-specific standards for 79 industries in 11 sectors
- Designed for use in public, annual financial reports targeted to investors
- Guided by a strong conceptual framework grounded in financial materiality
- Operated under the auspices of the SASB Foundation, a non-profit organization



The SASB Foundation Board

Fiduciary duty to oversee the funding and operations of the SASB and staff

Michael R. Bloomberg – Chair

Philanthropist, Founder of Bloomberg LP,
and the 108th Mayor of New York City

Mary Schapiro – Co Vice Chair

Promontory Advisory Board Vice Chair
Former Chairman – SEC

Robert K. Steel – Co Vice Chair

Partner & CEO
Perella Weinberg Partners

Alan Beller

Senior Counsel
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Delaware Management Holdings, Inc.

Laura Tyson, PhD

Director, Institute for Business
and Social Impact
Berkeley Haas School of Business

Audrey Choi

CEO – Institute for Sustainable
Investing, Morgan Stanley

Jim McIntire

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CIO, TIFF

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Former Chairman – FASB

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CEO – SICM

Chuck Zegar

Philanthropist, Co-Founder
of Bloomberg LP

Curtis Ravenel

Global Head, Sustainable Business and
Finance – Bloomberg LP



The SASB Lens on Financial Materiality

Standards targeted to the needs of users for financially relevant ESG information



SASB Standards

Identify ESG factors reasonably likely to affect the *financial condition or operating performance* of companies within an industry

Are acknowledged by the EU as a framework for use to provide information pursuant to *Directive 2014/95/EU* on non-financial reporting.

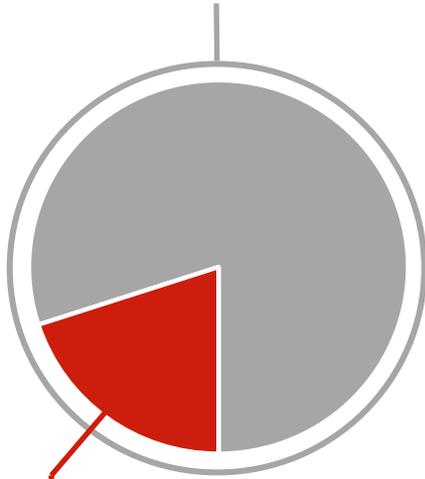
Can be used to guide disclosure of material information to investors in filings with the US SEC in Forms 10-K, 20-F and 40-F.

Complementary Efforts

Target sustainability information to specific audiences for specific purposes

Relevant Information

All environmental, social, and governance topics of interest



Material Information

Sustainability factors *likely to affect the financial condition or operating performance of a company*



All Stakeholders

Alignment is key



Investors

SASB's Standards Development Process



Evaluation of the Materiality of Sustainability Issues in Each Industry

SASB's research process starts with a broad universe of sustainability issues

Environment

- GHG emissions
- Air quality
- Energy management
- Water and wastewater management
- Waste and hazardous materials management
- Ecological impacts
- Climate impacts

Social capital

- Community relations
- Human rights
- Access and affordability
- Customer welfare
- Data privacy & security
- Selling practices & product labelling

Human capital

- Labor relations
- Labor practices & compensation
- Employee health, safety, and wellbeing
- Employee recruitment, engagement & diversity

Business model and innovation

- Product design & lifecycle management
- Product packaging & distribution
- Product quality and safety
- Supply chain management
- Materials sourcing
- Investment, credit, & underwriting ESG risks
- Rate structure & pricing
- Business model resilience

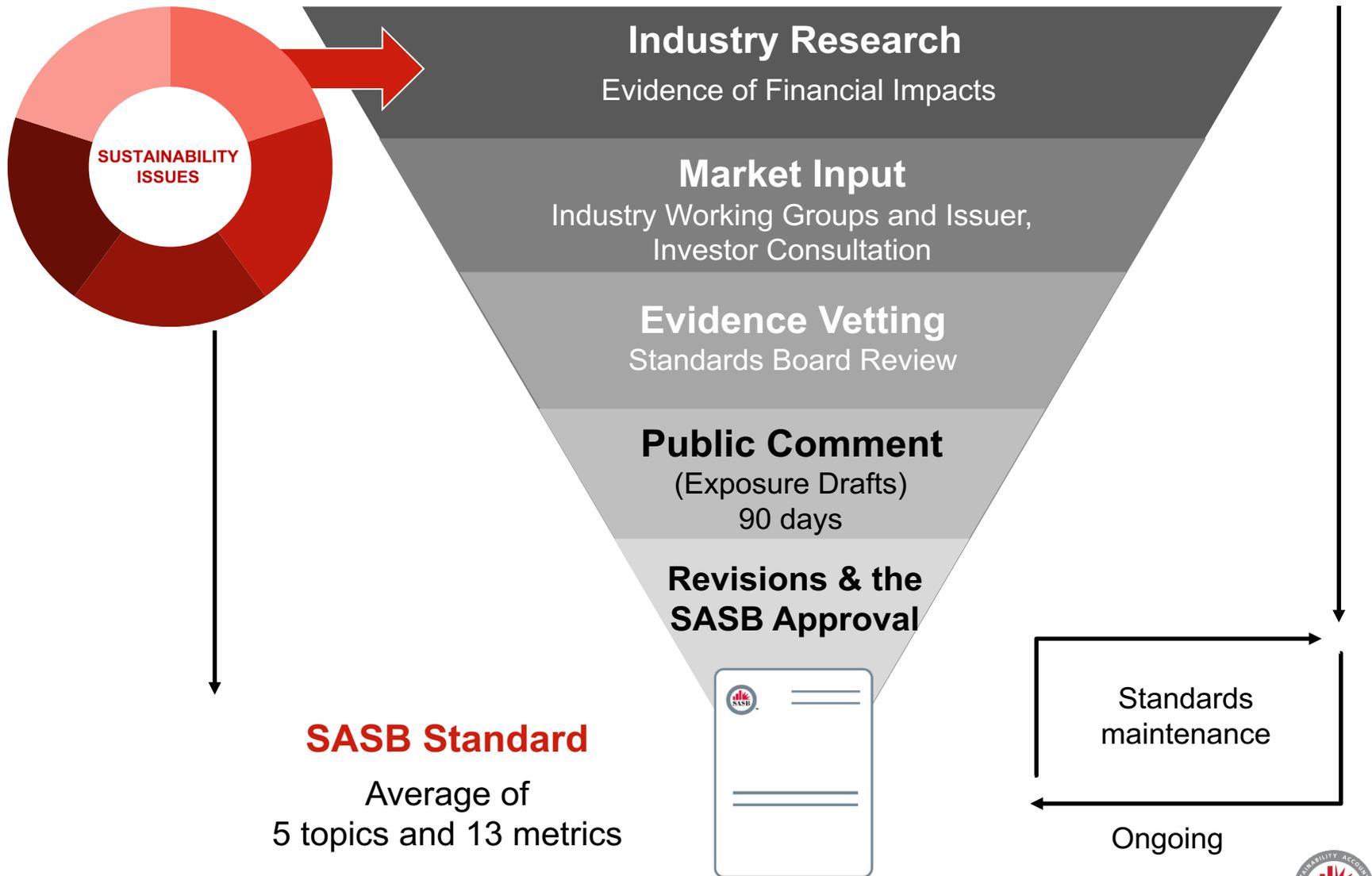
Leadership and governance

- Business ethics
- Competitive behavior
- Management of legal & regulatory environment
- Critical incident risk management
- Systemic risk management



Rigorous Process Drives SASB Standards

Standards for each industry are rooted in evidence and shaped by market input



Balanced Participation

SASB's standards-setting process informed by industry expertise

Industry Working Groups & Public Comments



2012-2016

Provisional Phase

>2,800

IWG PARTICIPANTS



172

PUBLIC COMMENT LETTERS

Consultation Participation



2016-2017

Consultative Phase

141 Companies

159 INDUSTRY CONSULTATIONS

19 Industry Associations

REPRESENTING HUNDREDS OF COMPANIES

38 Institutional Investors

271 INDUSTRY CONSULTATIONS

Anticipated Standing Sector Advisory Group Input



2018-onward

Standards Maintenance

11 Standing Sector Advisory Groups

12-15 members

MEMBERS REPRESENTING ISSUERS & INVESTORS



Expected Value Drivers

SASB's process identifies disclosure topics with evidence of impact on financial condition, operating performance or risk

Financial Impact

REVENUE

COST

ASSETS & LIABILITIES

COST OF CAPITAL

Types of Financial Drivers

Demand for Core Products and Services

Intangible Assets and Long-Term Growth

Operational Efficiency/Cost Structure

Valuation of Core Assets and Liabilities

Governance, License to Operate and Risk

Disclosure Topics Examples

Drug safety and side effects

Diverse workforce in technology

Energy-efficient chemicals production

Stranded coal assets

Operational safety of gas pipelines



Robust Standards Designed to Provide Decision-Useful Information

SASB standards contain industry-specific disclosure topics, metrics, and guidance

Table 1. Material Sustainability Topics & Accounting Metrics

TOPIC	ACCOUNTING METRIC
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under a regulatory program, percentage by hydrocarbon resource
	Amount of gross global Scope 1 emissions from: (1) combustion, (2) flared hydrocarbons, (3) process emissions, (4) directly vented releases, and (5) fugitive emissions/leaks
	Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets
Air Quality	Air emissions for the following pollutants: NO _x (excluding N ₂ O), SO _x , volatile organic compounds (VOCs), and particulate matter (PM)
Water Management	Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress
	Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water

Industry-specific disclosure topics

Technical protocol for compiling data; activity metrics for normalization

Accounting metrics for each disclosure topic

Reserves Valuation & Capital Expenditures

Description

Estimates suggest that E&P companies are unlikely to be able to extract a significant proportion of probable oil and gas reserves if GHG emissions are to be controlled to limit global temperature increases to 1.5 degrees Celsius. Companies with more carbon-intensive reserves and production and higher emissions, together with improved competitive energy technologies, could lower or reduce the growth in global demand, and therefore reduce the need for new gas products. Extraction costs could increase with regulations that put a price on GHG emissions, which could affect the net present value of oil and gas reserves. Regulatory actions that are more stringent or those focusing on industries with high emissions, could impair asset values substantially over time. Stewardship of capital resources and production decisions that take into account near-term risks related to climate change mitigation actions can help prevent current asset impairment and ensure long-term asset and creditworthiness.

Accounting Metrics

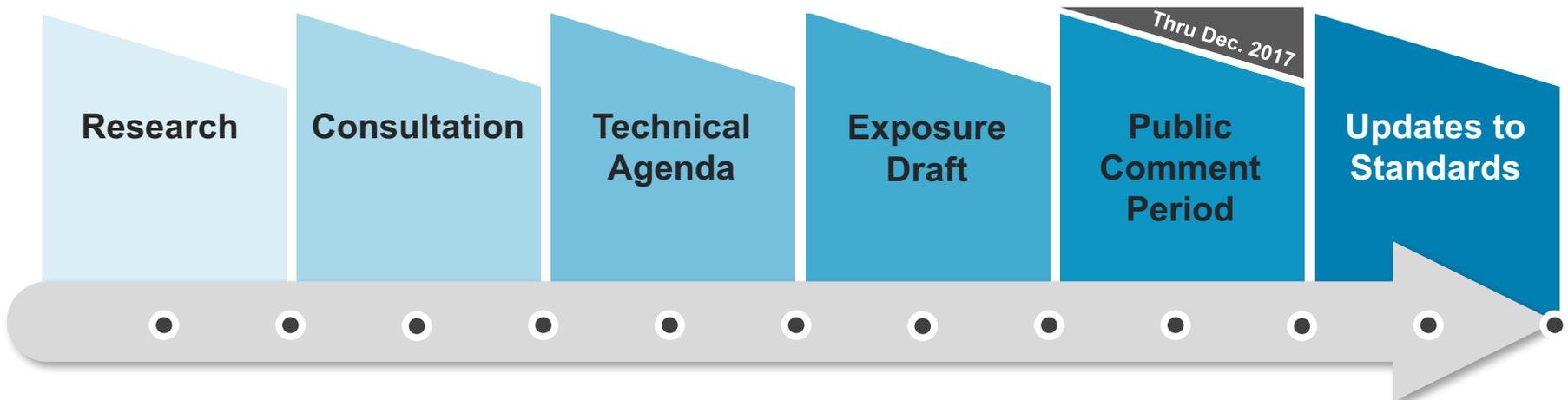
NR0101-22. Sensitivity of hydrocarbon reserve levels to future price projection scenarios
a price on carbon emissions

.122 The registrant shall conduct an analysis of its reserves to determine how several future price scenarios could affect its determination of whether the reserves are proved or probable.

Ongoing Standards Development Process

SASB standards will be maintained to evolve along with the markets they serve

3 YEAR PROCESS



The SASB Oversight and Decision-Making

- Quarterly meetings of the Sustainability Accounting Standards Board
- Board meetings are public. Board meeting information is available on <https://www.sasb.org/sectors/public-meetings-sasb/>
- General comment letters can be sent to comments@sasb.org; comments on standards can be made through <https://www.sasb.org/standards/exposure-drafts/>

SASB and Green Chemistry



Chemical Use Appears in Multiple SASB Industries

Important issue across the value chain

Industries

Chemicals

Containers & Packaging

Electrical Equipment

EMS ODM

Technology Hardware

Oil & Gas Services*

Building Products

Toys & Sporting Goods

Apparel & Accessories

Household Products

Appliances*

Multiline Retailers

Value Chain

Disclosure Topics

- Environmental Stewardship of Chemicals
- Product Lifecycle Management
- Management of Chemicals in Products
- Chemical & Safety Hazards of Products
- Product Environmental, Health, and Safety Performance
- Chemicals Management
- Product Sourcing, Packaging, and Marketing

* industries with proposed changes to chemicals metrics

Industry-specific Metrics

Quantitative and qualitative useful to multiple stakeholders

Qualitative

Discussion of strategy to (a) manage chemicals of concern and (b) develop alternatives with reduced human and/or environmental impact

Description of processes to maintain compliance with restricted substances regulations

Potential Financial Impact

- Revenue
- Brand value
- R&D
- Costs

Quantitative

Percentage of applicable products meeting volatile organic compound (VOC) emissions and content standards

Percentage of products by revenue that contain IEC 62474 declarable substances

- Revenue
- Brand value
- R&D
- Costs





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CFP and SASB—Exploring the Linkages

Richard Liroff

Investor Environmental Health Network

Investor Perspective on Chemicals Management

- Risks
 - Regulation
 - Reputation
 - Litigation
- Opportunities
 - First Mover Advantage
 - Drive Innovation and Grow Market Share

LUMBER LIQUIDATORS STOCK HIT



Market Winners and Losers



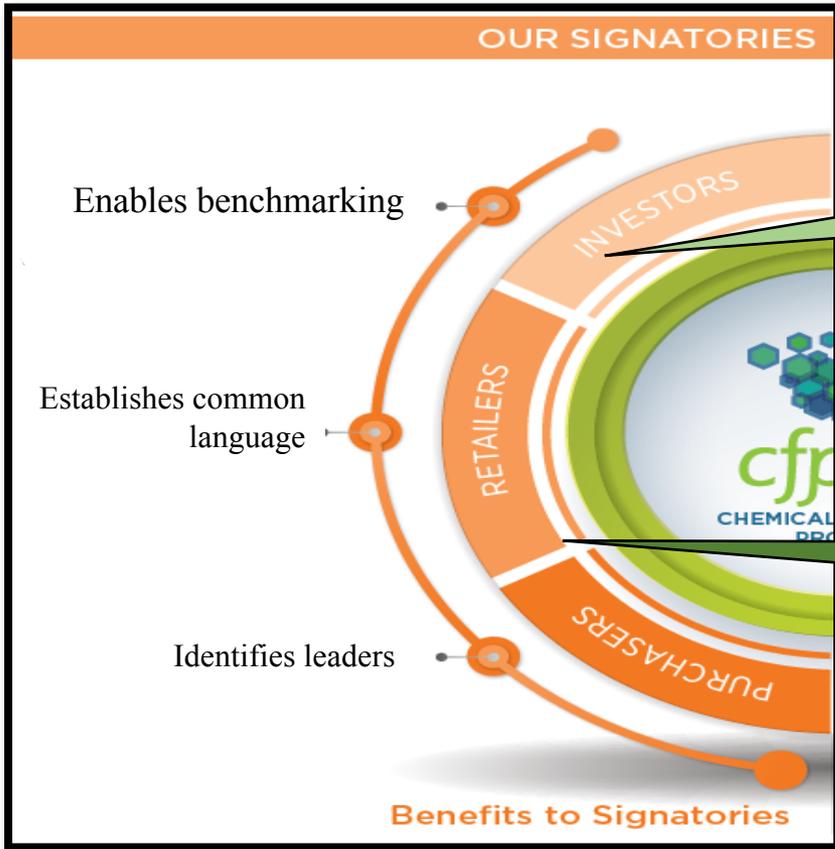
Reputational Hit



HOW INVESTORS USE CFP SURVEY DATA

- Insight into chemical management and supply chain management
- Proxy for good corporate governance practice
- Engagement – those that do not address the issue can find themselves a target
- Investment decision ideas

CFP Signatories

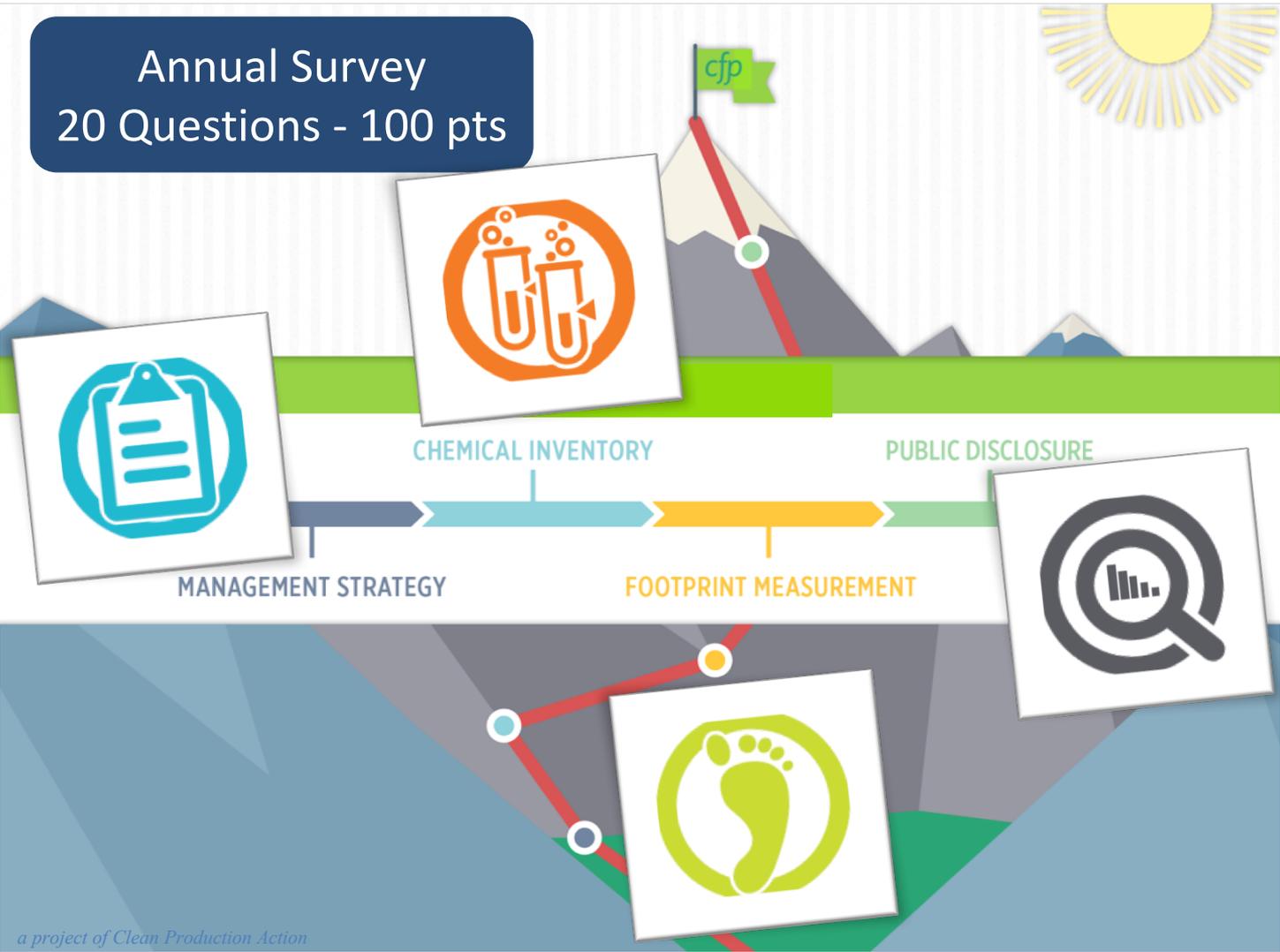


**\$2.3 trillion in assets
under management**

**\$600 billion in
purchasing power**



Annual Survey
20 Questions - 100 pts



a project of Clean Production Action

FIGURE ES-1. **All CFP Pillars: Small and Large Companies Selling Formulated Products**
(average percent of points)

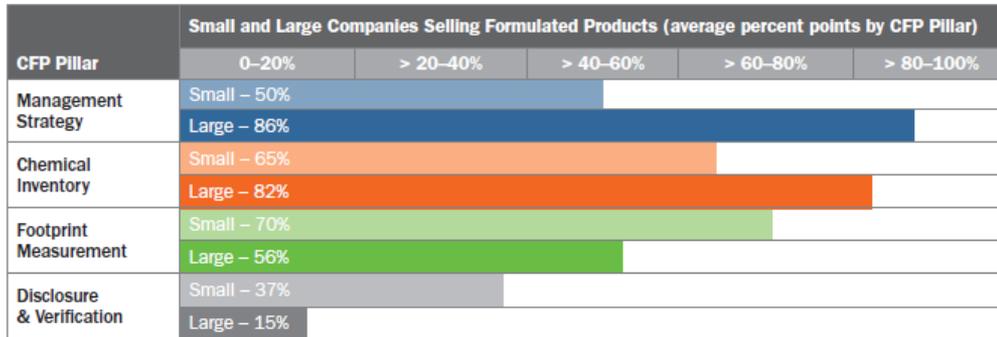
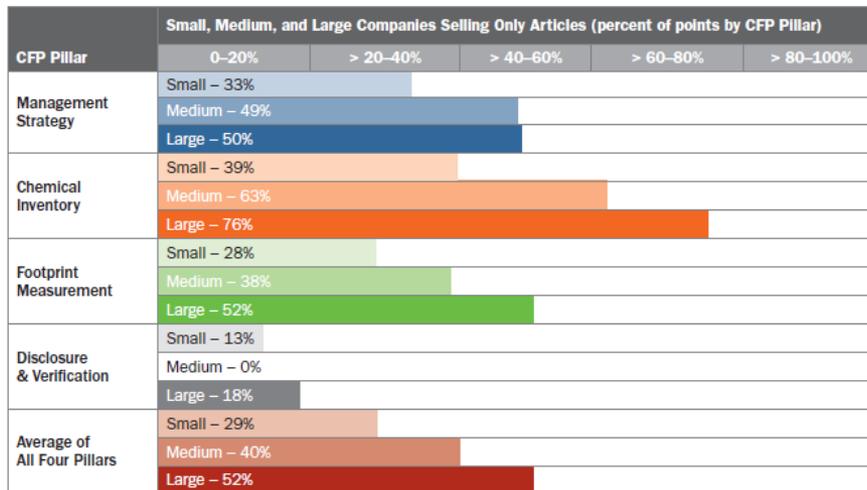


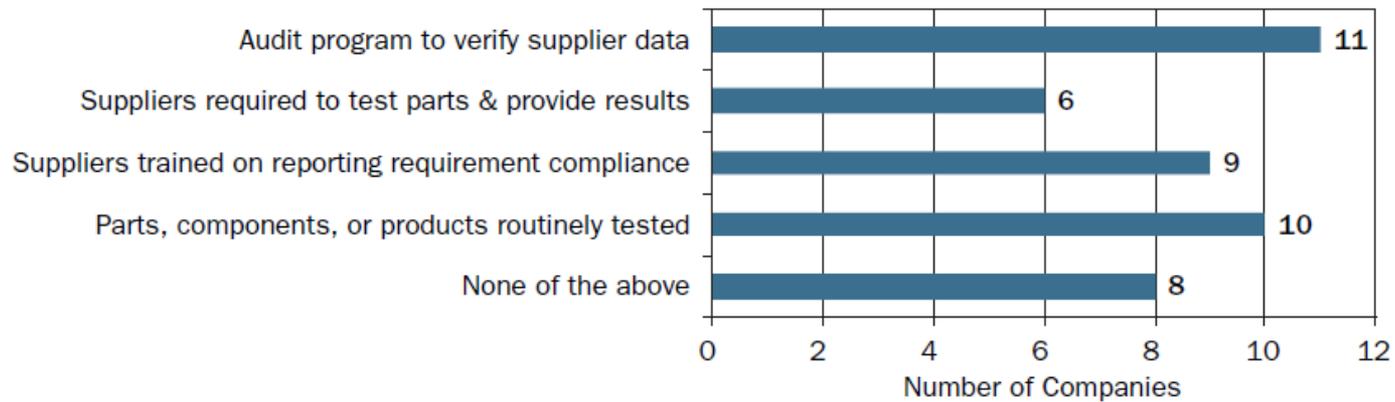
FIGURE ES-2. **All CFP Pillars: Small, Medium, and Large Companies Selling Only Articles**
(average percent of points) (Revised 10/26/17)





I6: Methods for assuring conformance with chemicals policy

I6. How does your company assure conformance with your chemicals policy? (5 points)



Aligning SASB and the Chemical Footprint Project

CFP Components

Management Strategy (“M”)

Chemical Inventory (“I”)

Footprint Measurement (“F”)

Public Disclosure and Verification (“D”)

SASB Building Products & Furnishings

- ...may contain harmful substances that have the potential to harm human health, including...
- ...potentially significant regulatory and reputational risk
- Increasing consumer concern...
- building certification standards such as LEED are driving demand... Companies that effectively manage harmful chemicals...may enjoy a competitive advantage over the long term...higher demand, reduced regulatory risk...improved reputation.

Accounting Metrics (Building Products)

- Describe chemical management processes:
 - Hazard-based, risk based, other? (M1, M2)
 - Use RSL? Screening Tools (WHO? IARC? Others?) (I1, I2, F4)
 - Life-cycle stage chemicals management: product design through to marketing? (M3, I3, I4, I5, I6)
 - Prioritize chemicals for reduction/elimination? Incorporate alternatives? Material substitution assessments? Greenscreen or DfE? (F1, M2, F5)
 - Third-party certification? (D4)
 - Timeline and progress? (F1, F2, F3)

Household and Personal Products Industry

- ...growing consumer and regulatory pressure...
- Larger retailers have implemented programs to ban chemicals of concern...
- Companies able to anticipate the changing regulatory landscape and implement stricter processes and testing will have a competitive advantage.
- Early adopters of innovations in green chemistry and the reduction of chemicals of concern may improve profitability...

Accounting Metrics (Household, Personal Products)

- Percentage of revenue from products containing SVHC Candidate List chemicals, California Candidate Chemicals List (F2, F3)
- Identify *emerging* chemical concerns. Discuss, e.g., parabens, antimicrobials, toluene, PVC, PE microbeads (I2, I3, I4)
- Hazard and risk assessment (F4)
- Product design, labeling, declarations (M3, F1, D1)
- Banned substances lists, material substitution assessments, screening methods (e.g., GreenScreen or CleanGredients) (I1, I2, F4)
- Discuss: chemicals in DTSC Draft Priority Work Plan, Prop 65, Washington State, etc.
- Revenue from products designed with green chemistry principles (citing 12 principles, ACS GCI, EPA Safer Choice, C2C). Possibly F2 and F3 (footprint calculation)

Additional SASB Categories

Apparel, Accessories and Footwear

Toys and Sporting Goods

Multi-line and Specialty Retailers and Distributors

Take-aways

- SASB's incorporation of the CFP indicators underscore that management of chemicals in products and supply chains is a financially material risk.
- Participation in CFP makes it easier for companies to respond to sector-specific standards incorporating chemical management concerns.
- For more information, visit www.chemicalfootprint.org.

Thank you!

Richard Liroff

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www.iehn.org

Question & Answer

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- Questions will be answered in order as they are received.

13th Annual GC3 Innovators Roundtable

May 8-10, 2018

Hosted by Eastman Chemical Company
MeadowView Conference Resort, Kingsport, Tennessee

Registration will open in January 2018



Tues. May 8	Wed. May 9	Thurs. May 10
Roundtable - half day conference	Roundtable - full day conference	Roundtable - full day conference
Evening Dinner Reception	Evening Dinner Reception	



Thanks for joining us!

For more information about the GC3:
www.greenchemistryandcommerce.org

