



SASB Industry Working Groups Due Process Report

RESOURCE TRANSFORMATION SECTOR

September 11, 2014

© 2014 SUSTAINABILITY ACCOUNTING STANDARDS
BOARD

Contents

Introduction.....	2
SASB Industry Working Group Overview	2
<i>Objective & Approach</i>	3
<i>Thematic Sectors and Industry Working Group Recruiting</i>	4
Open Enrollment	4
Active Outreach.....	4
Outreach and Advertising Channels	6
<i>IWG Process, Tools and Materials</i>	6
Industry Working Groups for the Resource Transformation Sector.....	8
<i>Resource Transformation Sector IWG Composition</i>	8
Recruiting – Planned vs. Actual	8
<i>Resource Transformation IWG Surveys</i>	17
APPENDIX I – Top Companies in Resource Transformation Sector by Revenue	22

Introduction

SASB develops and disseminates industry-specific accounting standards for material sustainability information for use by U.S. publicly-listed corporations and their investors, such that sustainability performance can be evaluated alongside financial performance. SASB standards identify, prioritize, and describe material non-financial risks and opportunities and provide decision-useful information for the benefit of companies, investors, and the public.

SASB was accredited by the American National Standards Institute (ANSI) as a national standard developer in December 2012, and follows ANSI best practices for standards development, summarized below:

- Consensus on a proposed standard by a group or “consensus body” that includes representatives from materially affected and interested parties
- Broad-based public review and comment on draft standards
- Consideration of and response to comments submitted by voting members of the relevant consensus body and by public review commenters
- Incorporation of approved changes into a draft standard
- The right to appeal by any participant that believes that due process principles were not sufficiently respected during the standards development in accordance with the ANSI-accredited procedures of the standards developer¹

SASB Industry Working Group Overview

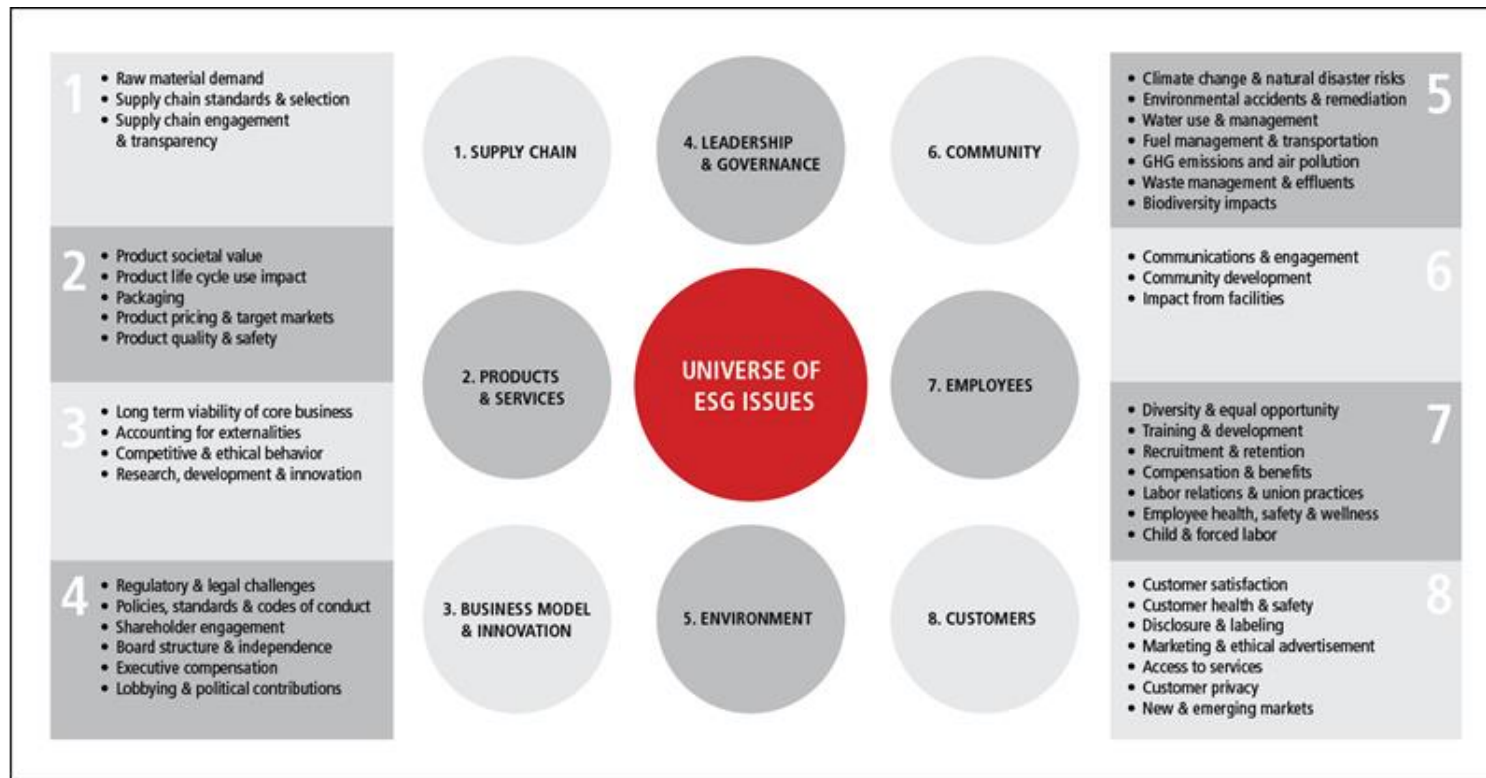
SASB Industry Working Groups (IWGs) play a critical role in helping achieve SASB’s mission. IWG members are industry experts with at least five years of experience in the industry for which they are reviewing SASB Standards. They are recruited across the following interest groups: reporting entities (corporations); market participants (investors and analysts), and; public interest/intermediaries (NGOs, academics, government officials, NGOs, etc.). IWGs convene to review SASB’s evidence-based research of ESG factors that are determined to be material for their industry and accounting metrics for the disclosure of those issues. IWGs provide important feedback on these disclosure topics and metrics, providing additional evidence of financial impact and/or evidence of interest, as well as suggesting others for which they have evidence of interest and/or financial impact.

¹http://www.ansi.org/standards_activities/domestic_programs/overview.aspx?menuid=3

OBJECTIVE & APPROACH

SASB Standards refine the set of Environmental, Social and Governance (ESG) issues (shown in Exhibit A) into a minimum set of ESG issues that are material to each industry through evidence-based research focused on evidence of financial impact and evidence of interest. SASB IWG objectives are to solicit technical feedback on material ESG issues identified by SASB for the industry in question – as well as suggested accounting metrics for the disclosure of those issues – from interest groups that will be affected by the standards (issuers), and those who will use the standards (market participants).

Exhibit A – Universe of ESG Issues Researched by SASB for Materiality



SASB's IWGs help ensure that the draft standards address only issues of interest and with a strong likelihood of financial impact in each industry. The IWGs provide feedback on whether SASB's proposed metrics for each issue are: applicable, auditable, complete, cost-effective, directional, useful, and relevant. In other words, the standards are designed to be *decision-useful to preparers and users of SASB standards*.

THEMATIC SECTORS AND INDUSTRY WORKING GROUP RECRUITING

SASB categorizes industries into thematic sectors and industry working groups based on their resource intensity as well as their sustainability innovation potential. The system by which SASB groups industries into thematic sectors and IWGs is known as SASB's Sustainable Industry Classification System™ (SICS™). SICS™ ties back to standard classification systems, such as Bloomberg's Industry Classification and Global Industry Classification Systems, so users don't have to learn another system.

Open Enrollment

Enrollment in IWGs is open to all qualified participants and industry experts register to join IWGs via [SASB's online registration form](#). Applicants' suitability for IWGs is screened by SASB's Stakeholder Engagement Team (SET) to ensure that they have sufficient experience and expertise in their fields and are actively involved in US capital markets. SET also monitors enrollment in IWGs to ensure that participation balanced across the following three interest groups:

1. Corporations (reporting entities)
2. Market Participants (investors, analysts and exchanges)
3. Public Interest/Intermediaries (NGOs, academics, government officials, NGOs, others not included in groups 1 and 2 above)

Active Outreach

SASB also conducts active outreach to recruit IWG participants via a variety of channels to ensure that interest groups are balanced across all industries in the thematic sector covered each quarter.

Targeted Outreach – Phase I

IWG recruiting begins with broad outreach across a variety of channels roughly two-months prior to the kick-off of each working group.

Referrals

Referrals are by far the best source for recruiting IWG members. During Phase I of targeted outreach, SET leverages SASB's Board of Directors, Advisory Council, past IWG members and subscribers to SASB's newsletter through an email blast requesting referrals to industry experts in upcoming IWGs.

Prospecting

When referrals are not available, contact information is obtained through publicly-available channels. SET engages in a prospecting process that involves developing contact lists of qualified professionals in the top fifteen publicly-traded companies. These prospecting lists are developed using LinkedIn, Data.com, and leveraging the team's personal networks. This prospecting phase serves as an important pipeline to streamline and scale the recruiting efforts in order to meet target numbers. (See Appendix I for a list of companies targeted in Phase I outreach for the Resource Transformation IWGs).

Ads and articles are also placed through SASB media partners (including Bloomberg, Responsible Investor, and GreenBiz), as well as through channels relevant to the industries being covered that quarter.

Bloomberg Terminal

SET also utilized the Bloomberg terminal to identify analysts and portfolio managers to participate in the investor interest groups of the Resource Transformation IWGs. Starmine was also used to identify top sell-side analysts covering the industries in the Resource Transformation sector.

Contractors

The SET deployed strategic contractor recruiters who have been selected based on their strong networks within the target interest groups. The recruiters were very helpful in registering strategic IWG members to the process for the Resource Transformation sector.

Strengthening IWG Responses

The SET has been fostering stronger IWG corporate participation by promoting broader internal participation to the survey. This approach has allowed for a more collaborative approach with key internal decision makers (sustainability, finance, legal, IR, etc.). The enrolled IWG member is provided with a pdf copy of the survey so that the responses can be vetted amongst the internal team. The online survey has a placeholder to add the names of survey respondents who participated in the process. This transparency is helpful for SASB to show that participation extends beyond sustainability leadership.

Targeted Outreach – Phase II

As registrants begin to populate SASB IWGs, more narrowly-focused outreach becomes necessary. This targeted approach focuses on areas in which open enrollment and Phase I Outreach results are not well balanced.

Targeted outreach in specific industry and interest groups involves: a second approach to Board and Advisory Council members, highly targeted media and LinkedIn outreach, and referrals from IWG registrants.

Industry associations and sector focus groups are also important vehicles through which SASB conducts outreach. SET conducted outreach to the following industry groups:

- American Forest & Paper Association
- Sustainable Forestry Initiative
- CEFIC- European Chemical Industry Council
- Conference Board, Product Stewardship Council
- WBSCD, Chemical Sector Working Group
- Sustainable Packaging Coalition (Green Blue)
- American Chemistry Council

Outreach and Advertising Channels

SASB's media partners are Responsible Industries (RI), Sustainable Industries Journal (SIJ), and GreenBiz. Although not an official media partner, Bloomberg Sustainability continues to be a tremendous media resource for SASB. These media partners helped publicize IWG recruiting for the Resource Transformation. GreenBiz continues to feature a quarterly article on SASB, recapping the sector just covered, and announcing the sector for which we are recruiting.

IWG PROCESS, TOOLS AND MATERIALS

IWG participants provide vital feedback on proposed SASB Standards during a one-month period of structured engagement. During this time, IWG participants review SASB Industry Briefs for their industry and are encouraged to contribute evidence supporting or refuting the financial impact of and/or interest in disclosure topics and related accounting metrics drafted by SASB.

IWGs commence with an introductory webinar through which IWG participants become familiar with SASB and the IWG work flow (shown in Exhibit B). Participants are provided with the following tools and materials through which to conduct their work:

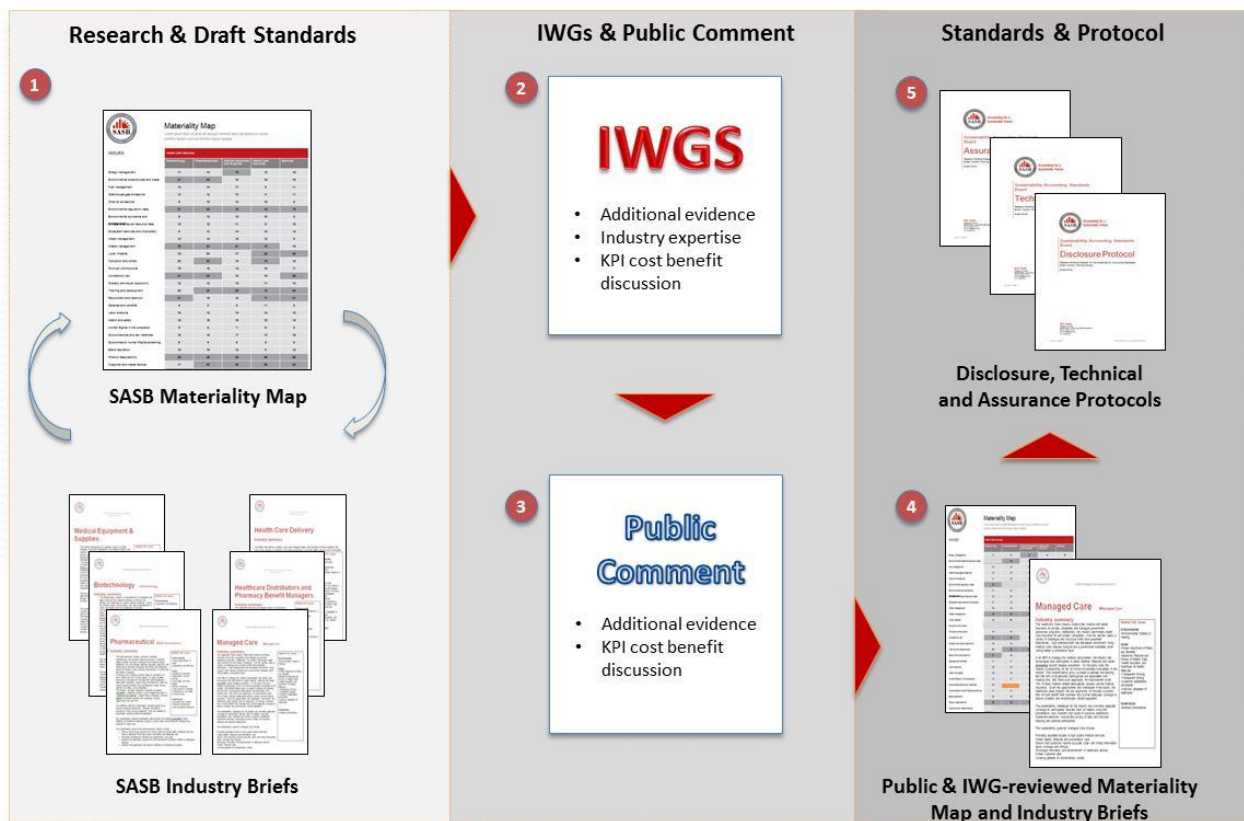
- Orientation materials outlining SASB's evidence-based standards-setting approach and the SEC's "lens of materiality"
- An optional orientation webinar (of which a recording is distributed to IWG members who cannot participate in the live broadcast)
- A SASB Industry Brief for their industry

- Access to a LinkedIn Group for their sector, through which industry experts are able to share evidence related to issues material to their industry and can communicate through an open forum with other group members and SASB
- A self-paced, electronic survey designed to capture detailed feedback on SASB Standards
- A mid-point “check-in” webinar during which members of the Research Team are made available to answer questions from IWG members

Minimum levels of participation in SASB’s IWGs require that participants: 1) read the SASB Industry Brief for the industry in which they are enrolled, and; 2) complete the online survey providing feedback on the disclosure topics and accounting metrics. Participation in online discussions, attendance on webinars, and follow up conferences are optional.

Survey results, as well as comments made via LinkedIn and through email, are compiled by SASB’S research team for review for consideration. All IWG communication with SASB is retained to document the standards development process. IWG members may also suggest other issues for which they have evidence of materiality, and issues they believe should be included in SASB Standards.

Exhibit B – SASB’s Work Flow, One Sector per Quarter



Industry Working Groups for the Resource Transformation Sector

SASB’s working groups (IWGs) covering the Resource Transformation sector were convened from May 6th through June 7th, 2014². Industries in this sector include:

Thematic Sectors		Industry Working Groups		Industries	
RT0000	Resource Transformation	RT0100	Chemicals	RT0101	Chemicals
				RT0200	Industrials
		RT0202	Electrical/Electronic Equipment		
		RT0203	Industrial Machinery & Goods		
		RT0204	Containers & Packaging		

RESOURCE TRANSFORMATION SECTOR IWG COMPOSITION

Recruiting – Planned vs. Actual

Ideal target levels are set for participation in SASB IWGs as follows: twelve experts per interest group per industry. With five industries in this sector, use of this methodology would result in a gross target of 180 working group survey registrants. In total, we exceeded this target by enrolling 222 IWG members. Exhibit C shows SASB’s targeted vs. actual IWG survey commitments based on interest group. It is important to note that the Chemical Industry represented the largest group, with 71 IWG participants. This showing is largely attributed to the partnership and outreach efforts by the American Chemical Council. Exhibit D provides details on Resource Transformation industry working group participants, including those who finalized their surveys.

² Periods of Structured Engagement for SASB Industry Working Groups generally span a 1-month period. Resource Transformation Sector IWGs were extended through June 16th to encourage higher survey completion rates.

Exhibit C: Composition of Resource Transformation Working Groups – Targeted vs. Actual Survey Commitments

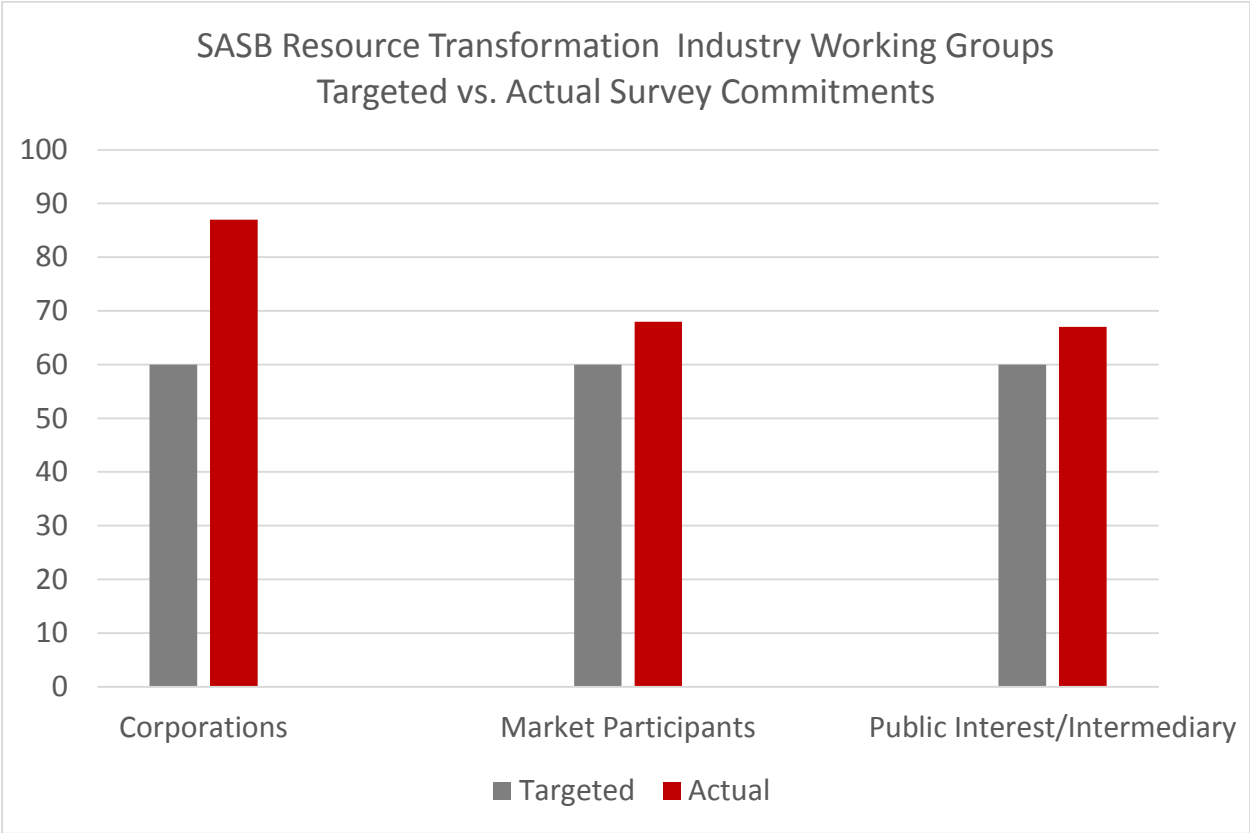
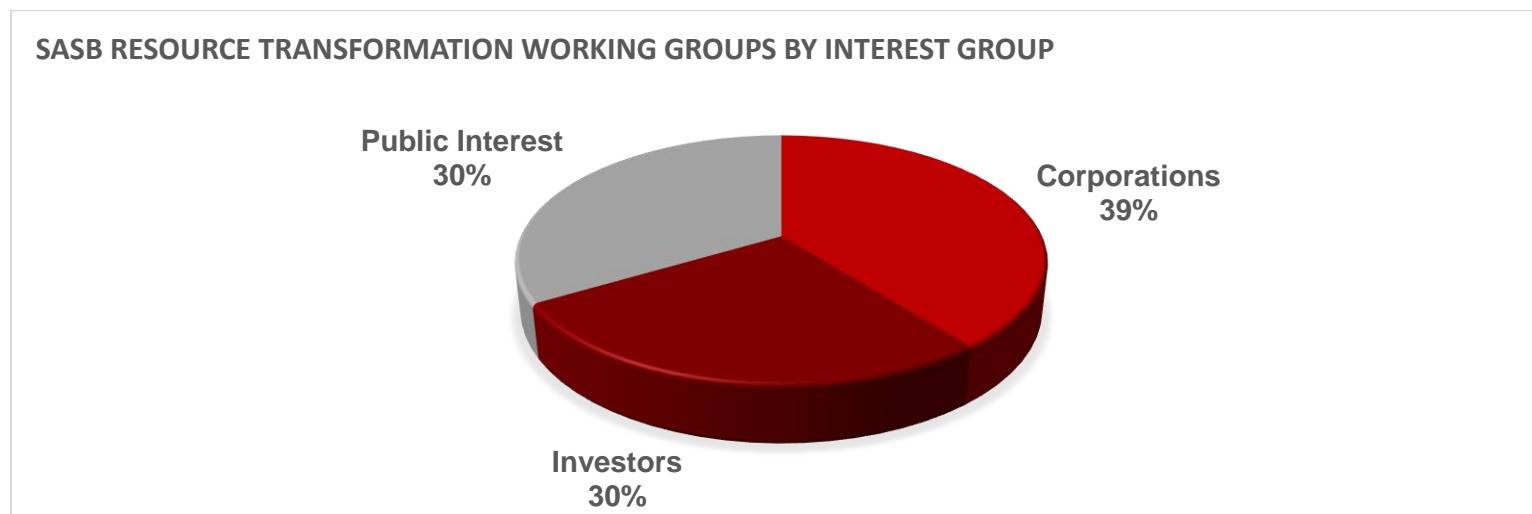


Exhibit D: Composition SASB Resource Transformation IWG Members*



**The list below excludes people who wish to remain anonymous. Organizations are listed for affiliation purposes only.*

Participated	Name		Title	Organization Name
No	Thomas	Andresen Gosselin	Sustainability Director	DNV KEMA
Yes	Christopher	Andress	Asst. VP, Equities	Washington Capital Management
No	Maricel	Apuli	SEC Reporting Manager	KLA-Tencor
Yes	Tuba	Atabey	Partner	SUSTAiNOVA Sustainability Consulting
Yes	Tuba	Atabey	Consultant	SUSTAiNOVA Sustainability Consulting
No	David	Aust	Managing Partner	Aust Ventures, LLC
No	Glenn	Austin	Director, Corporate Responsibility	Monsanto Company
Yes	Michel	Bande	Corporate Sustainability Officer	Solvay
Yes	Lisa	Beauvilain	Investment Manager (ESG & Policy)	Impax Asset Management

No	Ezra	Benjamin	Princ. Program Manager, Sustainability	EMC Corporation
No	Nevio	Benvenuto	Senior Manager Sustainability & Climate	PricewaterhouseCoopers
No	Libby	Bernick	Sr Vice President	Trucost
No	Anna	Blitz	Consultant	Antea Group
Yes	Jeroen	Bos	Head of Global Equity Research	ING Investment Management
Yes	Richard	Bourke	Senior Analyst	Bloomberg
No	Simon	Braaksma	Senior Director	Royal Philips Electronics NV
Yes	Andrew	Brengle	research analyst	MSCI
No	Melanie	Brooke-Lander	Director, HSE Programs and CSR	Baker Hughes
Yes	Steven	Bullock	Head of Research	Trucost
No	Peter	Burgess	Founder CEO	Tr-Ac-Net ... TrueValueMetrics
Yes	Halina	Caraello	Vice President EHS	Tyco
No	Veronica	Cavallaro	CEO and Founder	Iridescent
Yes	Marshall	Chase	Associate Director	BSR
Yes	Anirban	Chatterjee	GHG Lead Verifier	Bureau Veritas Certification
No	Darren	Cherry	Division President	Greif, Inc.
No	Darren	Cherry	Division President	Greif, Inc.
No	Peylina	Chu	Senior Consultant	Antea Group
Yes	Cecile	Churet	Senior Analyst	RobecoSAM AG
No	Steve	Clarke	Vice President Environmental Affairs and	Emerson
No	John	Clement	Consultant	Consultant
No	Jeff	Cohen	Senior VP	EOS Climate, Inc.
No	Mark	Connelly	Director	Credit Agricole Securities
Yes	Elizabeth	Connors	Assistant Professor	Michigan State University
No	Diana	Cosgrove	Director EHS Governance	Danaher Corporation
Yes	Mindy	Costello	Standards Development Liaison	NSF International
No	Craig	Coulter	Manager	EY
No	Inge	Craninckx	Business Controller Sustainability	Atlas Copco
No	Ashit	Dalal	Managing Consultant	e Delta Consulting, Inc.
Yes	Katarina	Danihlikova Engel	Financial & Statutory Accounting Denmark	The Dow Chemical Company
Yes	Christopher	Davidson	Director, Global Sustainability	MeadWestvaco

No	Agnes	de Jesus	Chief Sustainability Officer	Energy Development Corporation
Yes	Gregory	DeGulis	Partner	McMahon DeGulis LLP
Yes	Eric	DesRoberts	Project Associate	GreenBlue
Yes	Renita	Dixon	Sustainability and Environmental Coordin	Illinois Tool Works
No	Dorney	Douglass	Senior Director	IHS
No	Deane	Dray	Global Industrial Sectors Leader	Citigroup
Yes	George	DUrso	Director:Sustainability	RockTenn
No	Toby	Echelberry	Factory Controller	Pulmuone Foods, USA Inc.
No	Michael	Ellis	Partner	Green Order
No	Holly	Emerson	Senior Analyst	Ingersoll Rand
Yes	Ara	Erickson	Sustainability Manager	Weyerhaeuser
Yes	Michelle	Fairbairn	Head of CR Reporting & Strategy	BAE Systems
No	Robert	Fernandez	VP	Breckinridge Capital Advisors
No	John	Fillo	Principal Consultant	Trinity Consultants
Yes	Kyla	Fisher	Corporate Sustainability Director	PaperWorks Industries Inc
Yes	Gunnar	Friede	Director/Senior Portfolio Manager	Deutsche Bank
Yes	Phil	Friedman	Co-Head Aersospace & Defense Advisory	Perella Weinberg Partners
Yes	Linda	Froelich	Global Sustainability Director	FMC
No	JoAnn	Garbin	President	KnowE
Yes	William	Garcia	Executive Director	CEFIC
No	Russell	Gentry	Portfolio Manager	Walden Asset Management / Boston Trust
No	Joerg	Germann	Chief Technology Officer	Offsetters
No	Tracy	Gerstle	Senior Director Responsible Care®	American Chemistry Council
No	Dattatraya	Ghadge	finance manager	awal gulf mfg co
Yes	Marta	Górska	Chief Executive Officer	CSR Profit
No	Julie	Gorte	SVP for Sustainable Investing	Pax World Investments
No	Karan	Gulshan	Investment Professional	IFC - World Bank
No	Gretchen	Hancock	Manager, Resource Optimization	General Electric
No	Tonie	Hansen	Director, SER	NVIDIA
Yes	Katrina	Hendricks	Sustainability Operations	3M

Yes	Kurt	Herman	Principal Scientist	Gradient
Yes	Nick	Heymann	Co-Head Global Industrial Infrastructure	William Blair
No	Daniel	Holland	Senior Equity Analyst	Morningstar
No	Chunjiang	Huang	Environmental Engineer	Boeing
No	Eumy	Hung	Senior EHS Manager	Lam Research Corporation
Yes	Thomas	Irpan	Consultant	Business Infrastructure Services
Yes	Bozena	Jankowska	Global Co-Head ESG	Allianz Global Investors
No	Anne	Johnson	Principal, Vice President	Resource Recycling Systems
Yes	Chip	Johnson	Senior Manager Climate Change & Sustainability	Ernst & Young
No	Manjit	Jus	Sustainability Operations Manager	RobecoSAM AG
Yes	Jeff	Kauffman	Senior Vice President	Buckingham Research Group
No	Ajay	Kejriwal	Vice President	FBR Capital Markets
No	Mitch	Kennedy	Managing Member	Design with Nature, LLC
Yes	Jeremy	Kent	Analyst / Portfolio Manager	Allianz Global Investors
Yes	Kristin	Ketron	Sustainability	Eastman Chemical
No	Gary	Kiang	Vice President / Research Analyst	Franklin Templeton
No	Anne	Kilgore	Director, Global Sustainability	Eastman Chemical
Yes	Kitae	Kim	Sustainability Manager	AGCO
Yes	Bruce	Klafter	Sr. Director, Environmental, Health & Safety	Flextronics
Yes	Christoph	Klein		DB Advisors
Yes	Aiko	Kozaki	ESG Analyst	The Japan Research Institute, Ltd.
Yes	Bjoern	Kulmann	Director, Sustainability	Ball Corporation
Yes	Houssam	Lahrech	Director, ESG Research	Arabesque (Deutschland) GmbH
Yes	Dave	Lange	Sustainability Specialist	Haley & Aldrich, Inc.
No	Brian	Langenberg	President	Langenberg & Co.
No	Katie	Larsen	Acting Director Social Responsibility	The Children's Place
No	Mary Ann	Latko	Managing Director	AIHA
Yes	Donna	Lavolette	Sustainability Manager	Raytheon
Yes	Joel	Levington	Senior Analyst, Credit	Bloomberg
Yes	Elizabeth	Levy	Portfolio Manager	Trillium Asset Management
Yes	Gary	Lichtenstein	Principal	Lightstone Consulting, LLC

Yes	Richard	Love	Manager, Environmental Sustainability	United Technologies
Yes	Yaowen	Ma	Analyst	Verdantix
No	David	MacLean	Sustainability Manager	CHP & Associates Consulting Engineers, Inc.
Yes	Francis	Maher	President	Verasiti
Yes	Tanis	Marquette	Global Sustainability Leader	Momentive
No	Andy	Mason	SRI Analyst	Standard Life Investments
Yes	Liz	Matson	Senior	EY
Yes	Matt	Mattila	Environmental Attorney	Miller & Martin PLLC
Yes	Michael	McCauley	Senior Officer, Investor Prgrms & Gvrnc	State Board of Administration, Florida
Yes	James	McDonald	Manager, Sustainability	International Paper
Yes	Robert	McKay	Sustainability Leader	SABIC
No	Brigham	McNaughton	Manager	PwC
Yes	Cindy	Mehallow	Principal	CRM Communications
No	Parynaz	Mehta	Senior Manager	Johnson & Johnson
Yes	Jason	Metnick	Senior Vice President, Customer Affairs	Sustainable Forestry Initiative, Inc.
Yes	Luiza	Mihu	Analyst, Research Products	Sustainalytics
Yes	Jason	Miner	Sr. Senior Analyst, Chemicals	Bloomberg
No	Guy	Morgan	Director	BSR
No	Matthew	Morrison	Senior Manager, Corporate Sustainability	SABIC
Yes	Anne	Munaretto	Senior Consultant	EY
Yes	David	Nash	Partner	McMahon DeGulis LLP
Yes	Lucia	Natale	Consultor	Acenat
Yes	Paola	Nealon	Public Equity Investment Officer	Oregon State Treasury (OST)
Yes	Dave	Nelson	Lecturer	University of Michigan
Yes	Ooriapadikal	Ninan	Consultant	Ninan Associates
Yes	Tobias	Nystedt	Research Analyst	Bloomberg
Yes	Pamela	Oberski	Director - External Reporting	The Dow Chemical Company
Yes	Julie	O'Brien	Sustainability Director	Air Products and Chemicals, Inc.
No	Rainer	Ochsenkuehn	CEO	ROC One, LLC.
Yes	Steven	Olmsted	Principle Partner	Antimony Green

Yes	Yannick	Ouaknine	Senior ESG Analyst	Société Générale CIB
No	Chris	Perzan	Director of Environmental and Energy	Navistar
Yes	Thorsten	Pinkepank	Director Corporate Sustainability Relati	BASF
No	Andre	Podleisek	Head of Corporate Sustainability	Mettler-Toledo
Yes	Brian	Prince	Director-Marketing Analytics	Veolia Water North America
Yes	Timo	Punkari	Senior Partner	Lawrence William
No	Rakesh	Radhakrishnan	Director, Advisory Services	Thomson Reuters
Yes	Kurt	Ramin	director	KPR Associates
Yes	Cecil	Redd	Global Auditing and Americas EH&S Leader	Styron LLC
Yes	Dawn	Rittenhouse	Director, Sustainability	DuPont
Yes	Doug	Rothacker	Aerospace & Defense Analyst	Bloomberg
Yes	Laura	Rowell	Global Sustainability Manager	Sonoco
Yes	Jason	Roytman	Equity Analyst	New Amsterdam Partners
No	Max	Rutten	Managing Partner	Max Rutten
No	James	Salo	SVP	Trucost
No	Callan	Schoonenberg	Sustainability Lead	Eaton
No	Willem	Schramade	Analyst Materials, Global Equities	Robeco Asset Management
No	Katherine	Schrank	CEO	Sustainability Partners Inc.
Yes	Jerry	Schwartz	Senior Director, Energy and En	AF&PA
Yes	Charlie	Schwarze	Global Sustainability Manager	Amcor
No	Filippo	Servalli	marketing & sustainability director	radicigroup
No	Shally	Shanker	Impact Investing Advisor	Schmidt Family Foundation
Yes	Doug	Sharo	Lead SH&E & Sustainability Specialist	MWV
Yes	Jack	Shih	Director, Energy & Environment	Navistar
No	Sonja	Siewerth	Analyst	Sustainalytics
No	Saju	Skaria	Director, Aerospace & Defence	TATA Consultancy Services
Yes	Jessica	Smith	Corporate Sustainability Manager	Lockheed Martin
Yes	Michelle	Smith	Partner	Jewel Land Corp..
No	Lili	Stiefel	President	Stiefel Family Foundation
No	Matthew	Swibel	Director, Corporate Sustainability	Lockheed Martin
No	Hamish	Taylor	Strategic Advisor	Symrise AG

No	Jon	Taylor	Sr Project Director	WSP Group
Yes	Ryoji	Terada	senior manager	PWC Japan
Yes	Gabriel	Thoumi	Sr. Sustainability Analyst	Calvert Investments
Yes	Elisa	Tonda	Head Business and Industry Unit	UNEP
Yes	Elisa	Tonda	Head, Business and Industry Unit	UNEP
No	Frederik	Truelsen	Student	Technical University of Denmark
Yes	Karen	Ubelhart	Senior Analyst, Bloomberg	Bloomberg LP
Yes	Elizabeth	Uhlhorn	Project Manager, Sustainability	The Dow Chemical Company
No	Thomas	van Haaren	Associate Sustainability Analyst	Calvert Investments
No	Elze	van Hamelen	Sustainability Consultant	Van Hamelen Consulting
No	Aalok	Verma	Chief Operating Officer	Creative Manufacturing Solutions
No	Kim	Vu	CSR Associate	TE Connectivity
No	Richard	Wagner	Global Sustainability Manager	Chevron Phillips Chemical COmpany LP
No	Stiaan	Wandrag	Senior Manager: Sustainable Development	Sasol
No	Jeffrey	Watorek	Director of Financial Planning/ Analysis	Gibraltar Industries, Inc.
No	Colleen	Webster	Manager	Ernst & Young
Yes	Mark	Weick		The Dow Chemical Company
Yes	Megan	Weidner	Senior Environmental Engineer	Diebold
No	Brooke	Weizmann	Director of Sustainability	American Chemistry Council
Yes	Todd	Wenning	Equity Analyst	Morningstar
No	Dan Chi	Wong	Consultant	Paia Consulting
Yes	Jennifer	Woofter	President	Strategic Sustainability Consulting
No	Steve	Worthington	Founder	Acme Alpha, LLC
Yes	Glen	Yelton	Research Manager	IW Financial
No	Jamie	Zhu	Investment Officer	CalPERS

RESOURCE TRANSFORMATION IWG SURVEYS

Survey Composition & Administration

Composition

Resource Transformation IWGs were structured to solicit feedback on the ESG issues identified by SASB as likely being material for industries in this sector, and the proposed accounting metrics for disclosure of these issues in the Forms 10-K and 20-F.

Disclosure topics identified by SASB's research team for industries in the Resource Transformation sector are shown by industry in Exhibit E.

Surveys were dynamic; responses provided early in the surveys determined questions that follow. The same general survey format was used for all industries:

- Section 1: Material ESG Issues (10 – 15 minutes)
- Section 2: Accounting Metrics (15 – 20 minutes)
- Section 3: Comments on Industry Brief (5 minutes)

Section 1: Disclosure Topics

Material Issue Evaluation and Ranking

Respondents were asked to review the disclosure topics identified by SASB and answer the question, "is this a material issue" by checking a box to indicate, "Yes. It is material", "No. It is not material" or "I don't know."

Importance of Disclosure

The survey also asked participants to force rank the importance the disclosure topics identified for their industries. It is important to note that there was a problem with our survey for the Electronic/Electrical Equipment industry as it was missing the question for ranking. SET is working with the research team to conduct outreach efforts to the 13 participants of this industry working group with a request to rank the issues. This data will be then used by the research team to complete their analysis.

Additional Disclosure Topics

Respondents were also given the opportunity to identify up to three issues they believed were material to their industry but that had not been included in SASB's minimum set. For every material issue suggested for inclusion, participants were prompted to provide a contextual explanation of why the issue should be added to the minimum set. They were also prompted to upload documents as evidence to support the inclusion of the new issue and/or provide URLs linking to evidence to support the inclusion of the issue.

Exhibit E: SASB Disclosure Topics – Resource Transformation Sector

	Chemicals	Aerospace & Defense	Electrical / Electronic Equipment	Industrial Machinery & Goods	Containers & Packaging
Environment	<ul style="list-style-type: none"> Greenhouse Gas Emissions Air Quality Water Management Hazardous Materials Management 	<ul style="list-style-type: none"> Energy Management Water & Waste Management in Manufacturing 	<ul style="list-style-type: none"> Energy Management Air Emissions & Waste Management 	<ul style="list-style-type: none"> Energy Management Water Management Waste Management 	<ul style="list-style-type: none"> Greenhouse Gas Emissions & Energy Management Water Management Air Emissions & Waste Management
Social Capital		<ul style="list-style-type: none"> Data Security 	<ul style="list-style-type: none"> Product Quality & Safety 		<ul style="list-style-type: none"> Product Quality & Safety
Human Capital	<ul style="list-style-type: none"> Employee Health & Safety 				
B. Model & Innovation	<ul style="list-style-type: none"> Product Lifecycle Management & Innovation 	<ul style="list-style-type: none"> Product Lifecycle Management & Innovation Product Quality & Safety 	<ul style="list-style-type: none"> Product Lifecycle Management & Innovation 	<ul style="list-style-type: none"> Product Lifecycle Management & Innovation 	<ul style="list-style-type: none"> Product Lifecycle Management & Innovation
Leadership & Governance	<ul style="list-style-type: none"> Management of the Legal & Regulatory Environment Process Safety, Emergency Management & Response 	<ul style="list-style-type: none"> Management of the Legal & Regulatory Environment Business Ethics Supply Chain Management & Materials Sourcing 	<ul style="list-style-type: none"> Supply Chain Management & Materials Sourcing Business Ethics & Competitive Behavior 		<ul style="list-style-type: none"> Supply Chain Management & Materials Sourcing

Section 2: Accounting Metrics

The second section of each industry survey sought feedback on the accounting metrics delineated in the SASB Briefs for disclosure of disclosure topics in that industry. Participants were asked to first comment on the individual accounting metrics based on the following criteria:

- Relevance – Does the accounting metric adequately describe performance related to the disclosure topics, or is it a proxy for performance?
- Usefulness – Does it provide decision-useful information to companies? To investors?
- Cost-effectiveness – Is the data already collected by most companies or can it be collected in a timely manner and at a reasonable cost?
- Comparability – Will the data allow for peer-to-peer benchmarking within the industry?
- Auditability – Can the data underlying this accounting metric be verified?

Respondents were provided an opportunity to discuss the accounting metrics, to suggest alternatives, and to provide input on how each accounting metric is presented (units, aggregated and/or normalized). Respondents were also asked if they would like to suggest content for the Disclosure Notes (technical guidance) that will accompany accounting metrics for each disclosure topic.

Section 3 – Comments

The surveys also provided participants the opportunity to inform SASB of errors and omissions, as well as to provide general comments on the industry briefs.

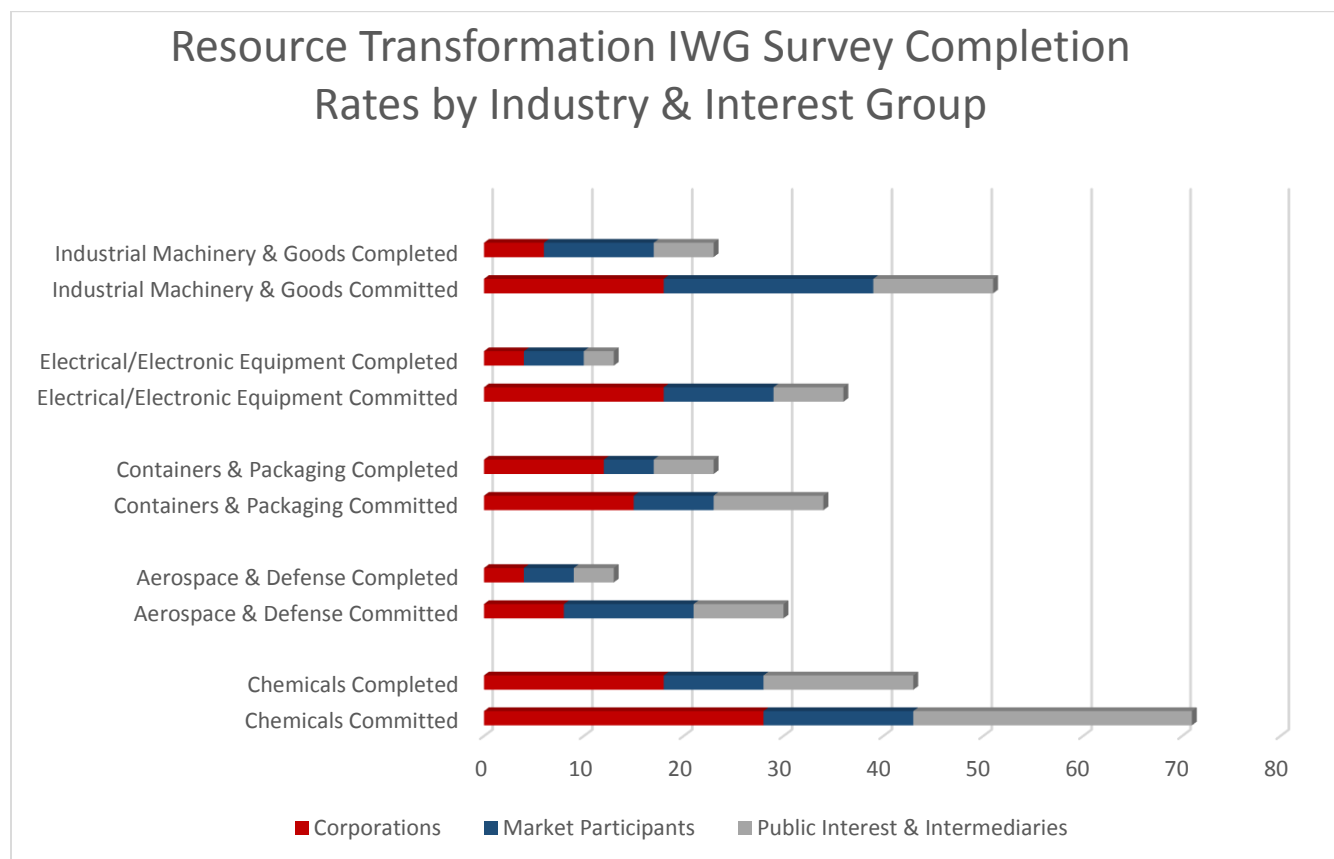
Administration

IWG members received links to unique, user-specific URLs to launch digital surveys hosted via FluidSurveys. URLs were associated with participant email addresses which allowed us to monitor which participants were actively engaged in the surveys and follow up with others who were not.

Survey Participation

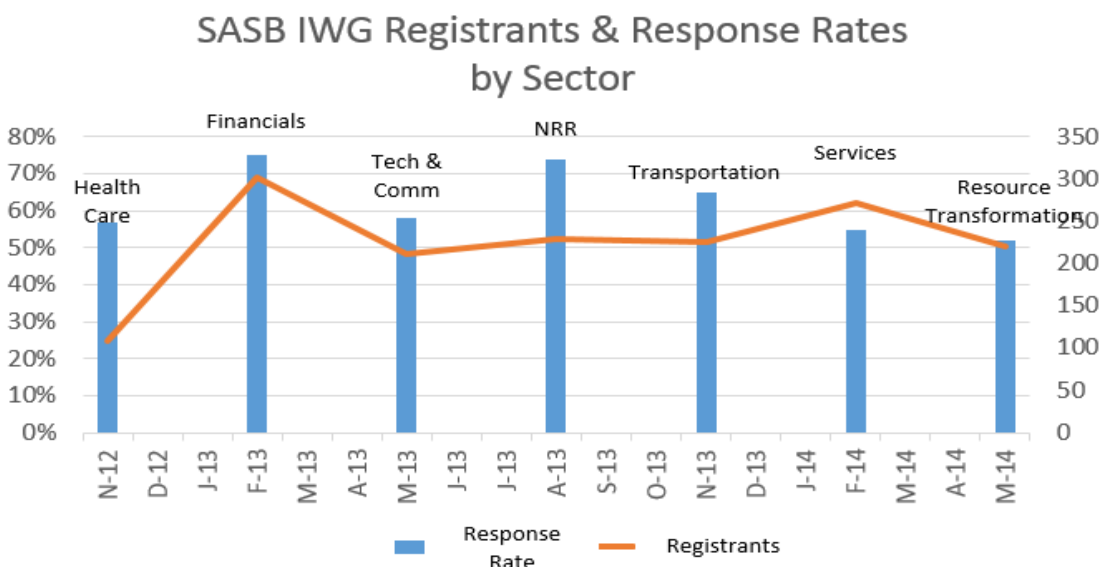
In total, 52% of Resource Transformation IWG surveys were completed. The completion rates by industry are shown in Exhibit F and are detailed both graphically and in a table that provides the raw numbers. The response rates are comparable with the working group survey completion status from previously-convened IWGs as shown in Exhibit G. The response rate of 52% is in line with that of most sectors. The tight timelines for IWG responses along with the narrow bandwidth by participants continues to be challenging. In particular, the outreach efforts to the Electronic/Electrical Equipment participants and industry groups proved challenging as reflected in their survey rates.

Exhibit F: Resource Transformation Survey Completion Rates by Industry



IWG (Committed vs. Completed)	Corporations	Market Participants	Public Interest	Totals	Completion Rate
Chemical Committed	28	15	28	71	61%
Chemical Completed	18	10	15	43	
Aerospace & Defense Committed	8	13	9	30	43%
Aerospace & Defense Completed	4	5	4	13	
Containers & Packaging Committed	15	8	11	34	68%
Containers & Packaging Completed	12	5	6	23	
Electrical/Electronic Equipment Committed	18	11	7	36	36%
Electrical/Electronic Equipment Completed	4	6	3	13	
Industrial Machinery & Goods Committed	18	21	12	51	45%
Industrial Machinery & Goods Completed	6	11	6	23	

Exhibit G: SASB IWG Registrants and Response Rates by Sector



Extension of the initial IWG deadline from June 6th to June 16th improved survey completion rates in most IWGs, with the exception of the Electronic/Electrical Equipment industry. This industry was particularly hard to recruit and was ultimately populated with many previous IWG groups from the Tech & Communications industry

Survey Results

Please see the *Standards Outcome Review* report, presented to the Standards Council by the Standards Development Team, for analysis of working group feedback.

APPENDIX I – Top Companies in Resource Transformation Sector by Revenue

Top 15 US-listed, non-OTC, companies with at least 20% of revenue from industry, by revenue (Source: EQS screens)

Chemicals		Aerospace & Defense		Electrical Equipment		Industrial Machinery		Containers & Packaging	
DOW CHEMICAL CO	US	BOEING CO/THE	US	ABB LTD-ADR	SZ	CATERPILLAR INC	US	INTL PAPER CO	US
DU PONT (EI)	US	LOCKHEED MARTIN	US	GENERAL ELECTRIC	US	DEERE & CO	US	3M CO	US
LYONDELLBASELL-A	US	UNITED TECH CORP	US	SIEMENS AG-ADR	DE	CNH INDUSTRIAL N	GB	ROCK TENN CO-A	US
BRASKEM SA-ADR	BR	GENERAL DYNAMICS	US	UNITED TECH CORP	US	CUMMINS INC	US	CROWN HOLDINGS I	US
SINOPEC SHA-ADR	CN	RAYTHEON CO	US	EMERSON ELEC CO	US	PACCAR INC	US	SEALED AIR CORP	US
AGRIUM INC	CA	NORTHROP GRUMMAN	US	HONEYWELL INTL	US	SIEMENS AG-ADR	DE	BALL CORP	US
MONSANTO CO	US	EMBRAER SA-ADR	BR	JOHNSON CONTROLS	US	AGCO CORP	US	OWENS-ILLINOIS	US
PPG INDS INC	US	L-3 COMM HLDGS	US	EATON CORP PLC	IE	NAVISTAR INTL	US	BEMIS CO	US
SYNGENTA AG-ADR	SZ	HONEYWELL INTL	US	INGERSOLL-RAND	IE	ILLINOIS TOOL WO	US	SONOCO PRODUCTS	US
PRAXAIR INC	US	TEXTRON INC	US	KONINKLIJKE P-NY	NL	PARKER HANNIFIN	US	BERRY PLASTICS G	US
HUNTSMAN CORP	US	HUNTINGTON INGAL	US	TYCO INTL LTD	SZ	WW GRAINGER INC	US	GRAPHIC PACKAGIN	US
MOSAIC CO/THE	US	SPIRIT AEROSYS-A	US	GEN CABLE CORP	US	TEREX CORP	US	MEADWESTVACO COR	US
SASOL LTD-SP ADR	ZA	PRECISION CASTPT	US	TE CONNECTIVITY	SZ	HD SUPPLY HOLDIN	US	GREIF INC-CL A	US
SHERWIN-WILLIAMS	US	EXELIS INC	US	AMPHENOL CORP-A	US	EATON CORP PLC	IE	GREIF INC-CL B	US
EASTMAN CHEMICAL	US	ROCKWELL COLLINS	US	ROCKWELL AUTOMATION	US	PENTAIR LTD-REG	SZ	SILGAN HOLDINGS	US

