



PROPOSED CHANGES TO PROVISIONAL STANDARDS

BASIS FOR CONCLUSIONS

Technology & Communications Sector

Electronic Manufacturing Services & Original Design Manufacturing

Software & IT Services

Hardware

Semiconductors

Telecommunication Services

Internet Media & Services

Prepared by the
Sustainability Accounting Standards Board®

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Introduction

Robust and resilient sustainability accounting standards must not only address the sustainability-related risks and opportunities faced by reporting organizations, they must themselves be sustainable. That is, they must be designed to continually and systematically adapt to an ever-changing world. For this reason, the SASB engages in ongoing technical research and market consultation to ensure the maintenance of decision-useful, cost-effective standards. As changes occur in an industry's competitive context, in the broader sustainability landscape, or in the interests of the reasonable investor, this approach—bolstered by rigorous analysis and bottom-up, market-based input—is key to maintaining a set of standards that evolve to support market needs.

When potentially necessary or appropriate updates to the standards are identified by the SASB's own research or through engagement with corporate issuers, investors, or other subject matter experts, those items may be added to the SASB's Research Agenda or future Technical Agendas, indicating that such items are under review. For such items, the SASB staff prepares proposed updates intended to both incorporate its findings and to satisfy the essential concepts of sustainability accounting set forth in the [SASB Conceptual Framework](#). These updates are then proposed to the SASB Standards Board for review and approval.

The Basis for Conclusions for the proposed changes to provisional standards details the SASB staff's considerations in developing the updates included in the published 2017 Technical Agenda, helping users to better understand the updates and the reasoning behind them. The Basis for Conclusions go hand-in hand with the Exposure Draft of the standard, and highlight the specific proposed updates and associated changes per industry per sector. An explanation and rationale for each change is included herein.

About the SASB

Established in 2011, the Sustainability Accounting Standards Board (SASB) is the independent standards-setting organization for sustainability accounting standards that meet the needs of investors by fostering high-quality disclosure of material sustainability information. The standards focus on known trends and uncertainties that are reasonably likely to affect the financial condition or operating performance of a company and therefore would be required to be disclosed under Regulation S-K. The standards are designed to improve the effectiveness and comparability of corporate disclosure on material environmental, social, and governance (ESG) factors in SEC filings such as Forms 8-K, 10-K, 20-F, and 40-F. Based on a rigorous process that includes evidence-based research and broad, balanced stakeholder participation, the SASB currently maintains provisional standards for 79 industries across 11 sectors.¹

The SASB Standards Board, seated in 2017, comprises nine members, representing a diversity of key perspectives, including standards-setting, corporate reporting, and investing and financial analysis. The Standards Board is responsible for guiding the standard-setting process and for the quality of its outcomes. The SASB operates in accordance with its primary governance documents, the [SASB Rules of Procedure](#) and [SASB Conceptual Framework](#). The [SASB Conceptual Framework](#) sets out the basic concepts, principles, definitions, and objectives that guide the SASB in its approach to setting standards for sustainability-related matters. The [SASB Rules of Procedure](#) establish the

¹ Where traditional industry classification systems group companies by sources of revenue, the SASB's approach considers the resource intensity of firms, and groups industries with like sustainability characteristics, including risks and opportunities, within SASB's Sustainable Industry Classification System™ (SICS™) found at: <https://www.sasb.org/sics/>. SASB has proposed a number of amendments to SICS, and the revised classification system will go into effect when the standards are codified in early 2018. Proposed changes to SICS are on SASB's website and the Updates proposed herein are based on the amended classification.

processes and practices followed by the SASB in its standard-setting activities, and in its oversight of related work undertaken by the SASB staff. The following fundamental tenets underpin the SASB's efforts:

- **Materiality-Focused:** SASB standards address the sustainability topics that are reasonably likely to have material impacts on the financial condition or operating performance of companies in an industry. In identifying sustainability topics that are reasonably likely to have material impacts, the SASB applies the definition of "materiality" established under the U.S. securities laws.² For more information, see the staff bulletin [SASB's Approach to Materiality for the Purpose of Standards Development](#).
- **Evidence-Based:** The SASB takes an evidence-based approach to assess whether sustainability topics are likely to be of interest to the reasonable investor, and whether they are reasonably likely to have material impacts on the financial condition or operating performance of a company. Evidence is drawn from both internal research and from credible external sources, such as financial filings, earnings calls, databases of U.S. government agencies, industry research products, and academic studies, among others.
- **Market-Informed:** The SASB standards are shaped in large part by feedback from participants in the capital markets—primarily corporate issuers and mainstream investors. The SASB actively solicits input and carefully weighs all stakeholder perspectives in considering which aspects of a sustainability topic warrant standardized disclosure and in determining how to frame, describe, and measure those aspects for the purposes of standardization. The SASB's consultation efforts have involved engagement through Industry Working Groups over a four-year period with more than 2,800 experts, representing \$23.4 trillion in assets under management and more than \$11 trillion market capitalization. Recently, deep consultation on the provisional standards included 141 companies (along with 19 industry associations, representing hundreds of companies) and 38 institutional investors (who consulted on 271 industries). Additionally, the SASB's Investor Advisory Group (IAG) comprises 28 organizations, representing more than \$20 trillion in assets under management, including BlackRock, California Public Employees' Retirement System (CalPERS), California State Teachers' Retirement System (CalSTRS), State Street Global Advisors, and others. This market feedback has played a significant role in shaping the SASB's 2017 Technical Agenda.

In its guidance and oversight role, the SASB operates in a sector committee structure, which assigns a minimum of three Standards Board members to each sector for review, discussion, and liaising with staff. The committees are structured as follows:

² TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438 (1976).

SASB Sector Committees

<p>Health Care <u>Industries:</u> Biotechnology & Pharmaceuticals; Medical Equipment & Supplies; Health Care Delivery; Health Care Distributors; Managed Care; Drug Retailers <u>Committee Members:</u> Lloyd Kurtz*, Bob Hirth, Jean Rogers</p>	<p>Renewable Resources & Alternative Energy <u>Industries:</u> Biofuels; Solar Technology & Project Developers; Wind Technology & Project Developers; Fuel Cells & Industrial Batteries; Forestry Management; Pulp & Paper Products <u>Committee Members:</u> Stephanie Tang*, Jeff Hales, Kurt Kuehn</p>	<p>Food & Beverage (formerly Consumption I) <u>Industries:</u> Agricultural Products; Meat, Poultry, & Dairy; Processed Foods; Non-Alcoholic Beverages; Alcoholic Beverages; Tobacco; Food Retailers & Distributors; Restaurants <u>Committee Members:</u> Stephanie Tang*, Elizabeth Seeger, Lloyd Kurtz</p>
<p>Financials <u>Industries:</u> Commercial Banks; Investment Banking & Brokerage; Asset Management & Custody Activities; Consumer Finance; Mortgage Finance; Security & Commodity Exchanges; Insurance <u>Committee Members:</u> Jeff Hales*, Dan Goelzer, Verity Chegar</p>	<p>Transportation <u>Industries:</u> Automobiles; Auto Parts; Car Rental & Leasing; Airlines; Air Freight & Logistics; Marine Transportation; Cruise Lines; Rail Transportation; Road Transportation <u>Committee Members:</u> Kurt Kuehn*, Jean Rogers, Jeff Hales</p>	<p>Consumer Goods (formerly Consumption II) <u>Industries:</u> Apparel, Accessories & Footwear; Appliance Manufacturing; Household & Personal Products; Building Products & Furnishings; Toys & Sporting Goods; Multiline and Specialty Retailers & Distributors; E-commerce <u>Committee Members:</u> Elizabeth Seeger*, Stephanie Tang, Kurt Kuehn</p>
<p>Technology & Communications <u>Industries:</u> Electronic Manufacturing Services & Original Design Manufacturing; Software & IT Services; Hardware; Semiconductors; Telecommunication Services; Internet Media & Services <u>Committee Members:</u> Bob Hirth*, Lloyd Kurtz, Verity Chegar</p>	<p>Services <u>Industries:</u> Education; Professional & Commercial Services; Hotels & Lodging; Casinos & Gaming; Leisure Facilities; Advertising & Marketing; Media & Entertainment <u>Committee Members:</u> Dan Goelzer*, Jeff Hales, Bob Hirth</p>	<p>Infrastructure <u>Industries:</u> Electric Utilities & Power Generators; Gas Utilities & Distributors; Water Utilities & Services; Waste Management; Engineering & Construction Services; Home Builders; Real Estate; Real Estate Services <u>Committee Members:</u> Jean Rogers*, Kurt Kuehn, Verity Chegar</p>
<p>Extractives & Minerals Processing (formerly Non-Renewable Resources) <u>Industries:</u> Oil & Gas - Exploration & Production; Oil & Gas – Midstream; Oil & Gas - Refining & Marketing; Oil & Gas – Services; Coal Operations; Iron & Steel Producers; Metals & Mining; Construction Materials <u>Committee Members:</u> Verity Chegar*, Elizabeth Seeger, Bob Hirth</p>	<p>Resource Transformation <u>Industries:</u> Chemicals; Aerospace & Defense; Electrical & Electronic Equipment; Industrial Machinery & Goods; Containers & Packaging <u>Committee Members:</u> Lloyd Kurtz*, Dan Goelzer, Jean Rogers</p>	<p style="text-align: right;">* Sector chair</p>

The Standards Board sector committees have reviewed proposed changes to the provisional standards, based on the Technical Agenda, in anticipation of ratifying the standards in Q1 2018.

Commenting

The SASB has voted to release the Proposed Changes to Provisional Standards: Basis for Conclusions compendium and the Exposure Drafts of the standards, thus initiating a 90-day Public Comment Period. The Public Comment Period will occur from October 2, 2017, to December 31, 2017. During this time, the public may submit comments to the SASB on the proposed updates to the standards. Public comments will be evaluated in the process to ratify the standards, expected in early 2018. Further guidance on the Public Comment Period, including instructions to submit comments and accessing the Basis for Conclusions and Exposure Drafts, is available at: <http://www.sasb.org/public-comment>. Other questions on the SASB or the Public Comment Period may be sent to: info@sasb.org.

Proposed Changes to Provisional Standards: Basis for Conclusion Overview

The following provides a detailed description of—and rationale for—each change proposed to the SASB Provisional Standard for the industries within the Technology & Communication sector. Changes may be related to content, including adding, removing, or reframing a topic or adding, removing, or revising a metric. Changes may also be technical in nature, including updates to a metric’s scope, definitions, third-party references, or harmonization across SASB’s standards and/or with external initiatives. Typographical and other editorial changes have not been included below but can be provided to interested parties or reviewed in the redline Public Comment Standard.

Guidance Used to Determine Proposed Updates

In preparing its proposed updates, the SASB is guided by the Fundamental Tenets of the SASB Approach to Standards-Setting, which are designed to better achieve the Core Objectives of the SASB, as established by the *SASB Conceptual Framework*.

Topic-Level Proposed Updates

Proposed updates that relate to the addition, removal, or reframing of a topic are based on the following Principles for Topic Selection (“Principles”), as established by the *SASB Conceptual Framework*:

- **Potential to affect corporate value.** Through research and stakeholder input, the SASB identifies topics that can or do affect operational and financial performance through three channels of impact: (1) revenues and costs, (2) assets and liabilities, and (3) cost of capital or risk profile.
- **Of interest to investors.** The SASB addresses issues likely to be of interest to investors by assessing whether a topic emerges from the “total mix” of information available through the existence of, or potential for, impacts on five factors: (1) direct financial impacts and risk; (2) legal, regulatory, and policy drivers; (3) industry norms, best practices, and competitive drivers; (4) stakeholder concerns that could lead to financial impacts; and (5) opportunities for innovation.

- **Relevant across an industry.** The SASB addresses topics that are systemic to an industry and/or represent risks and opportunities unique to the industry and which, therefore, are likely to apply to many companies within the industry.
- **Actionable by companies.** The SASB assesses whether broad sustainability trends can be translated into industry-specific topics that are within the control or influence of individual companies.
- **Reflective of stakeholder (investor and issuer) consensus.** The SASB considers whether there is consensus among issuers and investors that each disclosure topic is reasonably likely to constitute material information for most companies in the industry.

Metric-Level Proposed Updates

Proposed updates that relate to the addition, removal, or revision of a metric are based on the following Criteria for Accounting Metrics (“Criteria”), as established by the *SASB Conceptual Framework*:

- **Fair Representation:** A metric adequately and accurately describes performance related to the aspect of the disclosure topic it is intended to address, or is a proxy for performance on that aspect of the disclosure topic.
- **Useful:** A metric will provide useful information to companies in managing operational performance on the associated topic and to investors in performing financial analysis.
- **Applicable:** Metrics are based on definitions, principles, and methodologies that are applicable to most companies in the industry based on their typical operating context.
- **Comparable:** Metrics will yield primarily (a) quantitative data that allow for peer-to-peer benchmarking within the industry and year-on-year benchmarking for an issuer, but also (b) qualitative information that facilitates comparison of disclosure.
- **Complete:** Individually, or as a set, the metrics provide enough data and information to understand and interpret performance associated with all aspects of the sustainability topic.
- **Verifiable:** Metrics are capable of supporting effective internal controls for the purposes of data verification and assurance.
- **Aligned:** Metrics are based on those already in use by issuers or are derived from standards, definitions, and concepts already in use by issuers, governments, industry associations, and others.
- **Neutral:** Metrics are free from bias and value judgment on behalf of the SASB, so that they yield an objective disclosure of performance that investors can use regardless of their worldview or outlook.
- **Distributive:** Metrics are designed to yield a discernable range of data for companies within an industry or across industries allowing users to differentiate performance on the topic or an aspect of the topic.

Technical-Protocol Proposed Updates

Proposed updates that relate to the revision of technical protocols are based on the following attributes, designed to enable the technical protocols to serve as the basis for “suitable criteria,” as defined by the PCAOB’s AT Section 101³ and as referenced in the *SASB Conceptual Framework*:

- **Objectivity:** Criteria should be free from bias.
- **Measurability:** Criteria should permit reasonably consistent measurements, qualitative or quantitative, of subject matter.
- **Completeness:** Criteria should be sufficiently complete so that those relevant factors that would alter a conclusion about subject matter are not omitted.
- **Relevance:** Criteria should be relevant to the subject matter.

Proposed Updates Related to Other Elements of Standardized Presentation

Each SASB standard is presented in a structured manner to ensure consistent application and to facilitate the cost-effective preparation of material, decision-useful information. These core objectives guide the preparation of proposed changes that involve the revision of specific elements of standardized presentation. Such revisions—including those made to general disclosure guidance, industry descriptions, topic descriptions, and activity metrics—are based on the stated objectives and key characteristics of the element, as established by the *SASB Conceptual Framework*.

³ PCAOB, AT Section 101 – Attest Engagements



TECHNOLOGY & COMMUNICATIONS SECTOR

ELECTRONIC MANUFACTURING SERVICES & ORIGINAL DESIGN MANUFACTURING INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #TC0101

Prepared by the
Sustainability Accounting Standards Board®

October 2017

**Proposed Changes to Provisional
Standard - Basis for Conclusion**

Proposed Update #3-1 – **Industry:** Electronic Manufacturing Services & Original Design Manufacturing; **Topic Name:** Water & Waste Management in Manufacturing

2017 Technical Agenda Item #3-1 Description

SASB is evaluating the revision of the technical protocol for metric TC0101-02⁴ to align with international standards.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with provisional metric TC0101-02 to provide a more robust and internationally applicable definition of “hazardous waste.”

Adherence to Criteria for Accounting Metrics

The Electronic Manufacturing Services & Original Design Manufacturing (EMS/ODM) industry provisional standard includes a topic, Water & Waste Management in Manufacturing, with an associated quantitative metric to characterize a company’s management of risks related to the storage, use, and disposal of hazardous materials. Specifically, metric TC0101-02 asks for “Amount of hazardous waste from manufacturing, percentage recycled.” The provisional technical protocol underlying this metric asks companies to use the U.S. EPA’s Resource Conservation and Recovery Act’s (RCRA) definition of hazardous waste. Requiring registrants to classify wastes in non-U.S. jurisdictions using the EPA standard adversely affects the applicability of the metric, and its lack of alignment with common industry practice reduces cost-effectiveness.

To address these issues, the proposal would update the technical protocol associated with metric TC0101-02 to allow issuers to categorize waste according to local jurisdiction laws, an exercise that companies already undertake in most regions in which they operate. Company operations in the U.S. will continue to report using RCRA and applicable state laws. By establishing criteria free from regional bias while still providing for consistent measurement among issuers, the revision will also improve the objectivity and measurability of the technical protocol underlying the metric.

Supporting Analysis

The EMS/ODM industry is a highly global industry. The largest (by market cap) EMS/ODM company listed on a U.S. exchange notes that much of its production occurs outside the U.S.: “Our facilities consist of a global network of industrial parks, regional manufacturing operations, and design, engineering and product introduction centers, providing approximately 26 million square feet of productive capacity as of March 31, 2016. We own facilities with approximately 8.2 million square feet in Asia, 4.7 million square feet in the Americas and 2.7 million square feet in Europe.”⁵ Similarly, the second largest (by market cap) EMS/ODM company listed on a U.S. exchange, breaks out all 27 countries in which it has operations; the U.S. represents only 4.5 million square feet of nearly 40 million square feet of facilities total.⁶

Hazardous waste management leads to operating expenses, and, in some cases, capital expenditures or remediation costs. In most regions, including the U.S., Europe, and Asia, government regulations exist that address the

⁴ TC0101-02: Amount of hazardous waste from manufacturing, percentage recycled

⁵ Flextronics International LTD., FY2016 Form 10-K for the period ending March 15, 2016, p. 27.
https://s21.q4cdn.com/490720384/files/doc_financials/annual_reports/2016/2016-10k-Flex.pdf.

⁶ Jabil Circuit, Inc. FY2016 Form 10-K for the period ending August 31, 2016, p. 28.
<https://investor.shareholder.com/jabil/secfiling.cfm?filingID=1193125-16-742815&CIK=898293>.

categorization, generation, reclamation, and disposal of hazardous waste. Noncompliance with such regulations can result in regulatory penalties. Thus, companies undertake hazardous waste classification across the majority of their operations according to the prevailing regulation at the point of waste generation. The SASB proposal thus aligns the standards with existing company practices, eliminating the requirement to reclassify waste according to one regulation, the EPA RCRA.

The proposal will also align SASB's standard with the Global Reporting Initiative [Effluents and Waste 2016](#) Disclosure 306-2 a., which requires users of the standard to disclose total hazardous waste generated and recycled, among other measures, with hazardous waste classified according to local regulations. A review of the largest (by market cap) five EMS/ODM companies listed on U.S. exchanges showed that the two largest report per the GRI guidelines, and use the GRI definition for classifying hazardous waste within the GRI environmental indicator disclosures. This technical protocol revision therefore improves alignment with existing disclosure frameworks and likely reduces companies' reporting burden.

Stakeholder Consultation

Issuers: The SASB contacted six issuers in the industry during consultation to obtain input on the provisional standard. While two of these issuers were provided with briefings on the standard and one proceeded to provide specific input and suggest one or more revisions, the SASB did not focus such outreach efforts on this aspect of the standard. Issuers generally focused on providing input on the most significant aspects of the standard from their perspective.

Others: Subject matter experts noted that using a U.S.-based regulatory definition of hazardous waste may limit the applicability of the SASB standards.

Benefits

Improves the SASB standard: This technical protocol revision will ensure that the SASB's attribute of measurability is met as it will resolve ambiguity regarding the scope of the information companies are being asked to disclose. This technical protocol change will also improve the applicability of the metric, bringing SASB's standard more in line with current company practices.

Improves Alignment: Applying a standardized, internationally applicable definition for hazardous waste will also ensure the SASB's accounting metric criteria of alignment is met.

Proposed Update #3-2 – **Industry:** Electronic Manufacturing Services & Original Design Manufacturing; **Topic Name:** Supply Chain Management & Materials Sourcing

2017 Technical Agenda Item #3-2 Description

SASB is evaluating the revision and/or removal of metrics TC0101-11⁷ and TC0101-12⁸ associated with the topic to improve the cost-effectiveness.

Summary of Change – Revise Metrics

The SASB proposes to revise the scope of the Supply Chain Management & Materials sourcing disclosure topic to reframe the topic to better address financial impacts stemming from risks and opportunities related to resource scarcity. As a result of the topic revision, the SASB proposes to remove provisional metric TC0101-11, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.” Additionally, SASB proposes to remove the term “conflict minerals” from provisional metric TC0101-12, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Adherence to Criteria for Accounting Metrics

The Electronic Manufacturing Services & Original Design Manufacturing industry provisional standard contains a disclosure topic, Supply Chain Management & Materials Sourcing, which addresses risks related to sourcing of scarce or otherwise constrained materials. The provisional standard contains three metrics that focus on costs associated with critical materials⁹ (TC0101-10), smelters that are verified “conflict-free” (TC0101-11), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals¹⁰ (TC0101-12). Upon review of the financial impacts from this topic, it is apparent that resource scarcity is the factor that gives rise to financially material impacts that are systematically relevant across the industry, rather than the sourcing of materials from areas of conflict.

Resource scarcity can arise from low substitution ratio of inputs, the concentration of deposits in only a few regions, the environmental or social implications of extraction, and geopolitical considerations. These factors can lead to supply disruptions or price increases of key materials. The existence of conflict in certain regions is one of many contributing factors that can contribute to supply constraints. Therefore, it is appropriate to revise the scope of the topic to capture performance on exposure to resource scarcity and supply constraints. The topic revision will improve the relevance of the topic across the industry and ensure that the topic is more narrowly focused on financially material impacts. The topic revision will necessitate metric revisions; the SASB proposes to eliminate quantitative provisional metric TC0101-11, as well as eliminate the focus on conflict minerals in the qualitative provisional metric TC0101-12. These two metric revisions will improve the measurement of performance on the topic.

Supporting Analysis

Companies in the Electronic Manufacturing Services & Original Design Manufacturing industry may face risks related to sourcing certain materials due to the low substitution ratio of these inputs, the concentration of deposits in only a few countries, the environmental or social implications of extraction, and geopolitical considerations. Electronic

⁷ TC0101-11: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

⁸ TC0101-12: Discussion of the management of risks associated with the use of critical materials and conflict minerals

⁹ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction

¹⁰ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

hardware products use 50 to 60 percent of global tantalum consumption, up to 26 percent of tin consumption, and nine percent of gold consumption, accounting for a significant amount of global use of three of the four 3TGs.¹¹ Some countries impose production controls and export restrictions such as quotas and tariffs, which, in light of increasing demand for these materials, have had a significant impact on price and availability. For example, between 2010 and 2011 the price of rare earth metals doubled due to fears of Chinese export quotas.¹²

Companies also face increasing competition for these materials due to increasing global demand from other sectors, including transportation, renewable resources, and technology and communications, which can exacerbate supply constraints. Additionally, there exists the potential for reputational harm from indirectly funding social unrest or environmental damage by purchasing materials extracted in certain regions of the world.

Stakeholder Consultation

Investors: A limited number of investors commented that disclosure pertaining to conflict minerals is not likely to be a focal point in their investment decisions, and believed resource constraints are more likely to cause financial impacts.

Issuers: A limited number of issuers commented that conflict minerals disclosure is not relevant and not likely to result in material financial impacts or reputational impacts, despite regulatory reporting requirements.

Benefits

Improves the SASB standard: The proposed changes improve the relevance and likely materiality of the Supply Chain Management & Materials Sourcing topic.

¹¹ "Greening ICT supply chains – Survey on conflict minerals due diligence initiatives," International Telecommunication Union (ITU), 2012.

¹² Ibid.



TECHNOLOGY & COMMUNICATIONS SECTOR

SOFTWARE & IT SERVICES INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #TC0102

Prepared by the
Sustainability Accounting Standards Board®

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Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #3-3 – **Industry:** Software & IT Services; **Topic Name:** Environmental Footprint of Hardware Operations

2017 Technical Agenda Item #3-3 Description

SASB is evaluating the revision of the technical protocol for metric TC0102-01¹³ to align with international standards.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with provisional metric TC0102-01 to ensure that international measures of renewable energy—such as Guarantees of Origin (GOs), the EU equivalent of the United States’ RECs (both units of renewable energy credits)—are accounted for.

Description of Topic

The Software & IT Services industry provisional standard includes a topic, Environmental Footprint of Hardware Infrastructure, with associated metrics to describe a company’s management of energy and water issues related to their data center operations. Specifically, provisional metric TC0102-01 specifies that issuers should disclose the total amount of energy they use, along with the percentages of that energy from the grid or renewable sources, respectively. The provisional technical protocol describes how the issuer should calculate renewable energy, including the treatment of renewable energy units. Although the provisional technical protocol provides measurable, relevant guidance, it lacks references to renewable energy standards outside the United States. To ensure the completeness of the technical protocol, the SASB proposes revising the protocol to include references to these other equivalent standards—notably, the Guarantees of Origin (GOs) of the European Union.

Evidence

Companies with a global footprint are likely to have RECs, GOs, and other equivalent foreign renewable energy units on their books; this technical protocol update would provide clarity that the SASB recognizes GOs and other equivalents for reporting purposes. Companies commonly report aggregated renewable energy units, including equivalents (for which the revised technical protocol will outline guidance). For example, the largest company in this industry (by market cap), in its 2015 Citizenship Report, uses a single line item to note the renewable energy units it had purchased, but a footnote indicates the figure includes “Renewable energy certificates (RECs) in the United States, Guarantees of Origin in the European Union, GreenPower instruments in Australia, and GoldPower instruments in China, Taiwan, and Turkey.”¹⁴ Renewable energy units in different markets have subtle differences, but ultimately each is equivalent to 1 MWh of renewable energy produced, and has similar requirements for retirement (so that they cannot be double-counted). For example, the EU guideline 2009/28/EC mandated the creation of national registries for the trade of GOs.¹⁵ Updating the technical protocol to account for foreign renewable energy markets will help the technical protocol better fulfill the SASB’s attribute of completeness by providing a complete set of factors that are relevant to the subject matter.

¹³ TC0102-01: Total energy consumed, percentage grid electricity, percentage renewable energy

¹⁴ “Microsoft 2015 Citizenship Report Environmental Data Addendum,” Microsoft, 2015, accessed July 15, 2017, p. 3, <https://www.microsoft.com/about/csr/downloadhandler.ashx?id=03-02-07>.

¹⁵ “Directive 2009/28/EC of the European Parliament and of the Council,” Official Journal of the European Union, modified April 23, 2009, accessed August 30, 2017, <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009L0028>.

Stakeholder Consultation

Investors: The proposed change was presented to investors and no positive or negative feedback was received.

Issuers: Multiple issuers at global companies raised the concern that the current technical protocol did not recognize renewable energy standards outside of the U.S., and expressed a desire to ensure associated disclosures reflect the full extent of their renewable energy efforts.

Benefits

Improves the SASB standard: The inclusion of internationally recognized renewable energy units beyond RECs improves the completeness of the technical protocol associated with the metric by explicitly acknowledging their place in the market as well as their applicability to companies with different geographic profiles.

Improves alignment: Issuers are currently using renewable energy credit frameworks beyond just RECs; this update will improve SASB's alignment with these other frameworks.

Proposed Update #3-4 – **Industry:** Software & IT Services; **Topic Name:** Data Privacy & Freedom of Expression

2017 Technical Agenda Item #3-4 Description

SASB is evaluating the revision of metric TC0102-07¹⁶ to ensure the completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

The SASB proposes revising provisional metric TC0102-07 from “Number of government or law enforcement requests for customer information, percentage resulting in disclosure” to “Number of government or law enforcement requests for customer information, number of records requested, percentage resulting in disclosure.”

Description of Topic

The Software & IT Services industry provisional standard includes a topic, Data Privacy & Freedom of Expression, with five associated metrics to describe a company’s management of risks related to how it stores and protects customers’ sensitive data. Specifically, provisional metric TC0102-07 asks companies to disclose governmental and law enforcement requests for information. The revision of the metric to include the disclosure of the number of records requested will eliminate ambiguity in the information that would be elicited by the provisional metric and mirror the way companies currently disclose this information, thereby providing a fairer and more complete representation of performance and better accomplishing the core objectives of the standard by offering investors a more decision-useful set of disclosures when combined with the existing metrics related to the topic.

Evidence

The provisional metric does not present a fair representation of a company’s performance with respect to Data Privacy & Freedom of Expression, as it obfuscates the number of records that a government or law enforcement entity has requested (e.g., one request could ask for one record, or for thousands). More than 35 companies in the technology and communications sector issue standalone transparency reports that address this issue and break out the information in this manner.

For example, the largest (by market cap) company’s transparency report specifies both the number of requests and the number of accounts affected.¹⁷ The total number of requests, approximately 26,000, was significantly different than the number of accounts or users specified in these requests, which was approximately 45,000. Both numbers are needed to adequately understand the magnitude of impact. Adding the proposed metric, which breaks out the number of records requested, will therefore improve alignment with current industry practices.

As evidenced by the example above, the total number of requests alone would not provide investors the true magnitude of this privacy issue.¹⁸ Adding the proposed metric will improve alignment with current industry practices as well as improve the completeness of the set of disclosures related to Data Privacy & Freedom of Expression.

¹⁶ TC0102-07: Number of government or law enforcement requests for customer information, percentage resulting in disclosure

¹⁷ “Law Enforcement Requests Report,” Microsoft, 2016, accessed July 8, 2017, <https://www.microsoft.com/en-us/about/corporate-responsibility/lerr/>.

¹⁸ Neither the total number of requests nor the number of records collected alone tell investors about a company’s performance in this area, as the volume of law enforcement request is largely out of a company’s control. These figures become actionable for investors when paired with “the percentage resulting in disclosure.”

Stakeholder Consultation

Investors: Investors were supportive of changes that improve alignment with what companies currently disclose.

Issuers: The SASB contacted 17 issuers in the industry during consultation to obtain input on the provisional standard. While six of these issuers were provided with briefings on the standard and one proceeded to provide specific input and suggest one or more revisions, the SASB did not focus such outreach efforts on this aspect of the standard. Issuers generally focused on providing input on the most significant aspects of the standard from their perspective.

Benefits

Improves the SASB standard: This metric revision will improve the completeness of the standard.

Improves alignment: Issuers currently report the information broken out by number of requests and number of records requested.

Proposed Update #3-5 – **Industry:** Software & IT Services; **Topic Name:** Data Security

2017 Technical Agenda Item #3-5 Description

SASB is evaluating the addition of a metric to ensure the completeness and usefulness of the metrics associated with the topic.

Summary of Change – Add Metric

The SASB proposes adding a new metric, “Percentage of operations, by revenue, independently certified to a suitable third-party cybersecurity management standard.”

Description of Topic

The Software & IT Services industry provisional standard includes a topic, Data Security, which is focused on a company’s ability to protect customer data. The two-associated metrics describe an individual company’s performance as it relates to this issue. Specifically, quantitative metric TC0102-09 asks for a company’s past track record with data breaches, as well as the percentage of that group that contained customers’ personally identifiable information. Qualitative metric TC0102-10 asks companies to describe their strategy to approaching data security risks. Companies have a range of performance when it comes to cyber preparedness, and from qualitative descriptions alone it can be difficult to compare relative cyber risks. The addition of a quantitative metric which recommends the disclosure of the percentage of a company’s operations, by revenue, independently certified to a suitable third-party security standard will provide a more useful, and complete view of issuer cybersecurity practices that is aligned with external standards.

Supporting Analysis

While provisional metric TC0102-10 asks companies to discuss their cybersecurity strategies, this new metric will provide an additional quantitative indicator of company data security performance, which is useful and complete. The technical protocol to the metric requires issuer disclosure to be normalized by total revenue in order to provide a better understanding of the extent to which issuer operations are in compliance with a third-party cybersecurity management standard.

Alignment will be improved by referencing high-quality standards already in use by companies. The ISO 27001 standard (a leading example of a suitable third-party standard) is commonly used. For example, 5,573 information technology companies used ISO 27001 in 2015, a 20 percent increase over the previous year.¹⁹ This standard has already been adopted by companies and will provide a distributive representation of a company’s efforts.

The five largest companies in this industry, by market cap, reference integrating third-party cybersecurity standards into their business to some degree. However, absent the proposed metric, it is currently difficult to tell how much of a company’s operations would be covered by these efforts. The largest company (by market cap) lists its ISO 27001

¹⁹ “ISO Survey of certifications to management system standards” March 21, 2017, accessed July 12, 2017, <http://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1>.

certifications by product segment.²⁰ Two other large companies²¹ list them by both country and business unit. Two different large companies disclose that they have 27001 certifications for all applicable processes.²²

This new metric would provide a quantitative, and therefore distributive and comparable performance indicator to compare a company to peers.

Stakeholder Consultation

Investors: Multiple technology investors agreed that this issue deserves increased attention and there was consensus that a focus on management systems is the best path to quantify this subject. Investors noted that companies should have an externally verified cybersecurity framework, and the percentage of a company's operations that had been evaluated in this way is crucial to being able to understand the magnitude of the related risk.

Others: The proposed metric was suggested by and discussed with multiple subject matter experts who believe it to be a good proxy for corporate data security performance.

Benefits

Improves the SASB standard: This metric would help with the comparability of companies' commitment to cybersecurity. It would provide investors with useful information that they have indicated they would like to

Improve decision-usefulness: Adding a forward-looking quantitative metric will help investors assess the cyber risks of their investment by improving the comparability of the metrics associated with this topic.

Improves alignment: This metric will use strong certifications, such as the ISO 27001 family, that are already being used by leading companies.

²⁰ "Security, Audits, and Certifications," Microsoft, accessed August 2, 2017, https://www.microsoft.com/online/legal/v2/en-us/MOS_PTC_Security_Audit.htm.

²¹ "ISO 27001," IBM, accessed August 5, 2017, https://www-935.ibm.com/services/us/en/it-services/iso_27001__a1031826.html; "Quality at SAP," SAP, accessed August 4, 2017, <https://www.sap.com/corporate/en/company/quality.html>.

²² "Making a Difference Corporate Citizenship Report 2016", Accenture, 2016, p. 13, accessed June 29, 2017, https://www.accenture.com/t20170329T044918_w_us-en/acnmedia/PDF-48/Accenture-2016-Corporate-Citizenship-Report.pdf-zoom=50.

Proposed Update #3-6 – **Industry:** Software & IT Services; **Topic Name:** Data Security

2017 Technical Agenda Item #3-6 Description

SASB is evaluating the revision of metric TC0102-09²³ to ensure the usefulness and completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

The SASB proposes revising provisional metric TC0102-09 from “Number of data security breaches and percentage involving customers’ personally identifiable information” to “Number of data security breaches, percentage involving customers’ personally identifiable information (PII), number of customers affected.”

Description of Topic

The Software & IT Services industry provisional standard includes a topic, Data Security, with associated metrics that describe a company’s management of risks related to the storage and protection of its users’ sensitive data. The provisional metric is ambiguous in terms of what data are being asked for. Specifically, the technical protocol of the provisional metric does not satisfy two technical protocol attributes, including measurability and completeness. The proposed revision will eliminate ambiguity regarding what data are being asked for by clarifying that the number of unique data security breaches shall be disclosed, thereby improving the measurability and completeness of the metric. Furthermore, the proposed revised metric will provide more useful information by including the number of customers affected by such data security breaches—a critical element to understand the magnitude of breaches. The proposed metric benefits from being more aligned with current corporate disclosures on the topic than the current metric. Overall, the proposed metric will better accomplish the core objectives of the standard by clarifying that the number of unique incidents is to be disclosed, which improves the measurability and completeness of the associated technical protocol, as well as the inclusion of the number of customers affected by such incidents, which will improve the usefulness of the metric.

Supporting Analysis

The existing technical protocol associated with the provisional metric does not satisfy the measurability and completeness attributes of a technical protocol, as it does not specify what is intended to be measured by “number of data security breaches.” This may include number of unique instances of breaches, or it may include the number of exposed customer records. For example, if a company faced two cyber-attacks during the reporting period, with one exposing 200,000 customer records, and another exposing 50,000 customer records, the provisional metric is unclear whether the company would report this as “2” or “250,000.” Evidence shows that both the number of incidents and the number of customers affected are useful data points for understanding the frequency and magnitude of data security breaches.

Furthermore, an analysis of corporate disclosures demonstrates that, broadly speaking, this structure of disclosure that includes the number of incidents and the number of customers affected is a best practice for corporate disclosures. For example, after their own major breaches, some of the largest publicly-listed companies²⁴ in the technology sectors

²³ TC0102-09: Number of data security breaches and percentage involving customers’ personally identifiable information

²⁴ Brad Arkin, “Important Customer Security Announcement,” Adobe, October 3, 2013, accessed August 8, 2017, <https://blogs.adobe.com/conversations/2013/10/important-customer-security-announcement.html>.

revealed, for the respective incidents, the number of customers affected. One company's public disclosure after a data breach provides an illustrative example of the alignment of the proposed change with current corporate disclosures on the topic. In 2016, the company disclosed an unauthorized data breach associated with more than 1 billion users, the largest known data breach to date. The firm's disclosure distinguished between unique incidents and number of customers' accounts compromised, consistent with the proposed metric.²⁵

Stakeholder Consultation

Investors: Many investors across multiple industries and sectors consistently communicated during SASB's consultation period that clarification of this metric was necessary—and there was strong agreement for the proposed metric.

Issuers: Multiple issuers voiced confusion over the wording of the metric in its current version and communicated that it needed to be clarified in a manner similar to the proposed revision.

Benefits

Improves the SASB standard: The proposed revision will improve the measurability and the completeness of the technical protocol.

Improves decision-usefulness: The proposed revision will generate more useful information, given that both the number of unique cyber security data breaches and the number of customers affected are important elements needed to better understand corporate performance on the topic.

²⁴ Cory Scott, "Protecting Our Members," LinkedIn, May 18, 2016, accessed August 8, 2017, <https://blog.linkedin.com/2016/05/18/protecting-our-members>; "Yahoo Security Notice December 14, 2016," Yahoo, 2016, accessed July 24, 2017, <https://help.yahoo.com/kb/SLN27925.html>; Selena Larson, "Verizon data of 6 million users leaked online," CNN, July 12, 2017, accessed September 1, 2017, <http://money.cnn.com/2017/07/12/technology/verizon-data-leaked-online/index.html>

²⁵ "Yahoo Security Notice December 14, 2016," Yahoo, 2016, accessed July 24, 2017, <https://help.yahoo.com/kb/SLN27925.html>.



TECHNOLOGY & COMMUNICATIONS SECTOR

HARDWARE INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #TC0103

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #3-7 – **Industry:** Hardware; **Topic Name:** Supply Chain Management & Materials Sourcing

2017 Technical Agenda Item #3-7 Description

SASB is evaluating the revision and/or removal of metrics TC0103-08²⁶ and TC0103-09²⁷ associated with the topic to improve the cost-effectiveness.

Summary of Change – Revise Metrics

The SASB proposes to revise the scope of the Supply Chain Management & Materials sourcing disclosure topic to reframe the topic to better address financial impacts stemming from risks and opportunities related to resource scarcity. As a result of the topic revision, the SASB proposes to remove provisional metric TC0103-08, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.” Additionally, SASB proposes to remove the term “conflict minerals” from provisional metric TC0103-09, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Description of Topic

The Hardware industry provisional standard contains a disclosure topic, Supply Chain Management & Materials Sourcing, which addresses risks related to sourcing of scarce or otherwise constrained materials. The provisional standard contains three metrics that focus on costs associated with critical materials²⁸ (TC0103-07), smelters that are verified “conflict-free” (TC0103-08), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals²⁹ (TC0103-09). Upon review of the financial impacts from this topic, it is apparent that resource scarcity is the factor that gives rise to financially material impacts that are systematically relevant across the industry, rather than the sourcing of materials from areas of conflict.

Resource scarcity can arise from low substitution ratio of inputs, the concentration of deposits in only a few regions, the environmental or social implications of extraction, and geopolitical considerations. These factors can lead to supply disruptions or price increases of key materials. The existence of conflict in certain regions is one of many contributing factors that can contribute to supply constraints. Therefore, it is appropriate to revise the scope of the topic to capture performance on exposure to resource scarcity and supply constraints. The topic revision will improve the relevance of the topic across the industry and ensure that the topic is more narrowly focused on financially material impacts. The topic revision will necessitate metric revisions; the SASB proposes to eliminate quantitative provisional metric TC0103-08, as well as eliminate the focus on conflict minerals in the qualitative provisional metric TC0103-09. These two metric revisions will improve the measurement of performance on the topic.

Evidence

Companies in the Hardware industry may face risks related to sourcing certain materials due to the low substitution ratio of these inputs, the concentration of deposits in only a few countries, the environmental or social implications of extraction, and geopolitical considerations. Hardware products use 50 to 60 percent of global tantalum consumption, up to 26 percent of tin consumption, and nine percent of gold consumption, accounting for a significant amount of

²⁶TC0103-08: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

²⁷TC0103-09: Discussion of the management of risks associated with the use of critical materials and conflict minerals

²⁸ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction

²⁹ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

global use of three of the four 3TGs.³⁰ Some countries impose production controls and export restrictions such as quotas and tariffs, which, in light of increasing demand for these materials, have had a significant impact on price and availability. For example, between 2010 and 2011 the price of rare earth metals doubled due to fears of Chinese export quotas.³¹

Companies also face increasing competition for these materials due to increasing global demand from other sectors, including transportation, renewable resources, and technology and communications, which can exacerbate supply constraints. Additionally, there exists the potential for reputational harm from indirectly funding social unrest or environmental damage by purchasing materials extracted in certain regions of the world.

Stakeholder Consultation

Investors: A limited number of investors commented that disclosure pertaining to conflict minerals is not likely to be a focal point in their investment decisions, and believed resource constraints are more likely to cause financial impacts.

Issuers: A limited number of issuers that participated in consultation commented that conflict minerals disclosure is not relevant and not likely to result in material financial impacts or reputational impacts, despite regulatory reporting requirements. Issuers further indicated that the sourcing of certain materials could be material. However, SASB did not receive specific input from issuers in this industry.

Benefits

Improves the SASB standard: The proposed changes improve the relevance and likely materiality of the Supply Chain Management & Materials Sourcing topic.

³⁰ “Greening ICT supply chains – Survey on conflict minerals due diligence initiatives,” International Telecommunication Union (ITU), 2012.

³¹ Ibid.



TECHNOLOGY & COMMUNICATIONS SECTOR

SEMICONDUCTORS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #TC0201

Prepared by the
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October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #3-8 – **Industry:** Semiconductors; **Topic Name:** Water & Waste Management in Manufacturing

2017 Technical Agenda Item #3-8 Description

SASB is evaluating the revision of the technical protocol for metric TC0201-05³² to ensure the completeness of the metrics associated with the topic.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with provisional metric TC0201-05 to provide a more robust and internationally applicable definition of “hazardous waste.”

Description of Topic

The Semiconductor industry provisional standard includes a topic, Water & Waste Management in Manufacturing, with an associated quantitative metric to characterize a company’s management of risks related to the storage, use, and disposal of hazardous materials. Specifically, provisional metric TC0201-05 asks for “Amount of hazardous waste from manufacturing, percentage recycled.” The current technical protocol underlying this metric asks companies to use the U.S. EPA’s Resource Conservation and Recovery Act’s (RCRA) definition of hazardous waste. Requiring registrants to classify wastes in non-U.S. jurisdictions using the EPA standard adversely affects the applicability of the metric, and its lack of alignment with common industry practice reduces cost-effectiveness.

To address these issues, the proposal would update the technical protocol associated with metric TC201-05 to allow issuers to categorize waste according to local jurisdiction laws, an exercise that companies already undertake in most regions in which they operate. Company operations in the U.S. will continue to report using RCRA and applicable state laws. By establishing criteria free from regional bias while still providing for consistent measurement among issuers, the revision will also improve the objectivity and measurability of the technical protocol underlying the metric.

Supporting Analysis

The Semiconductor industry is a highly global industry, evidenced by the fact that three of its five largest (by market capitalization) participants listed on U.S. exchanges have major manufacturing operations outside the United States. One of the largest companies (by market cap) notes that 44 percent of its square footage of manufacturing facilities is located outside the U.S.³³ Similarly, another large semiconductor company lists factories in China, Japan, Malaysia, Singapore, and Taiwan.³⁴ Another company notes that it has manufacturing operations in Israel and Singapore.³⁵ All these companies, and many others in the industry, must deal with categorizing waste across many regions outside the U.S.

Hazardous waste management leads to operating expenses and in some cases capital expenditures or remediation costs. In most regions, including the U.S., Europe, and Asia, government regulations exist that address the

³² TC0201-05: Amount of hazardous waste from manufacturing, percentage recycled

³³ Texas Instruments FY2016 for the period ending December 31, 2016, p. 6, 14, accessed July 10, 2017, <http://investor.ti.com/secfiling.cfm?filingID=1564590-17-2142&CIK=97476>.

³⁴ Micron Technology, Inc. FY2016 Form 10-K for the period ending September 1, 2016, pg. 6. <http://files.shareholder.com/downloads/ABEA-45YXOQ/4737564472x0xS723125-16-269/723125/filing.pdf>.

³⁵ Applied Materials FY2016 Form 10-K for the period ending October 30, 2016, p. 23, accessed July 10, 2016, <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NjU3Njg5fENoaWxkSUQ9MzYzODAzfFR5cGU9MQ==&t=1>.

categorization, generation, reclamation, and disposal of hazardous waste. Noncompliance with such regulations can result in regulatory penalties. Thus, companies undertake hazardous waste classification across the majority of their operations according to the prevailing regulation at the point of waste generation. The SASB proposal thus aligns the standards with existing company practices, eliminating the requirement to reclassify waste according to one regulation, the EPA RCRA.

The proposal will also align SASB's standard with the Global Reporting Initiative [Effluents and Waste 2016](#) Disclosure 306-2 a., which requires users of the standard to disclose total hazardous waste generated and recycled, among other measures, with hazardous waste classified according to local regulations. A review of the top five semiconductor companies by market capitalization showed that all report per the GRI guidelines, and use the GRI definition for classifying hazardous waste within the GRI environmental indicator disclosures. This technical protocol revision therefore improves alignment with existing disclosure frameworks and likely reduces companies' reporting burden.

Stakeholder Consultation

Issuers: The SASB contacted seven issuers in the industry during consultation to obtain input on the provisional standard. While two of these issuers were provided with briefings on the standard, none provided specific input. No direct feedback was received from issuers in the industry regarding the proposed change. However, issuers generally provided feedback in support of changes which would improve the alignment of SASB standards, and existing disclosure on this topic from the five largest issuers implies some industry comfort with this disclosure.

Others: Subject matter experts noted that using a U.S.-based regulatory definition of hazardous waste may limit the applicability of our standards.

Benefits

Improves the SASB standard: This technical protocol change will ensure that the SASB's attribute of measurability is met as it will resolve ambiguity regarding the scope of the information companies are being asked to disclose. This technical protocol change will also improve the applicability of the metric, bringing SASB's standard more in line with current company practices.

Improves alignment: Applying a standardized, internationally applicable definition for hazardous waste will also ensure the SASB's accounting metric criteria of alignment is met.

Proposed Update #3-9 – **Industry:** Semiconductors; **Topic Name:** Supply Chain Management & Materials Sourcing

2017 Technical Agenda Item #3-9 Description

SASB is evaluating the revision and/or removal of metrics TC0201-12³⁶ and TC0201-13³⁷ associated with the topic to improve the cost-effectiveness.

Summary of Change – Revise Metrics

The SASB proposes to revise the scope of the Supply Chain Management & Materials sourcing disclosure topic to reframe the topic to better address financial impacts stemming from risks and opportunities related to resource scarcity. As a result of the topic revision, the SASB proposes to remove provisional metric TC0201-12, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.” Additionally, SASB proposes to remove the term “conflict minerals” from provisional metric TC0201-13, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Description of Topic

The Semiconductor industry provisional standard contains a disclosure topic, Supply Chain Management & Materials Sourcing, which addresses risks related to sourcing of scarce or otherwise constrained materials. The provisional standard contains three metrics that focus on costs associated with critical materials³⁸ (TC0201-11), smelters that are verified “conflict-free” (TC0201-12), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals³⁹ (TC0201-13). Upon review of the financial impacts from this topic, it is apparent that resource scarcity is the factor that gives rise to financially material impacts that are systematically relevant across the industry, rather than the sourcing of materials from areas of conflict.

Resource scarcity can arise from low substitution ratio of inputs, the concentration of deposits in only a few regions, the environmental or social implications of extraction, and geopolitical considerations. These factors can lead to supply disruptions or price increases of key materials. The existence of conflict in certain regions is one of many contributing factors that can contribute to supply constraints. Therefore, it is appropriate to revise the scope of the topic to capture performance on exposure to resource scarcity and supply constraints. The topic revision will improve the relevance of the topic across the industry and ensure that the topic is more narrowly focused on financially material impacts. The topic revision will necessitate metric revisions; the SASB proposes to eliminate quantitative provisional metric TC0201-12, as well as eliminate the focus on conflict minerals in the qualitative provisional metric TC0201-13. These two metric revisions will improve the measurement of performance on the topic.

Evidence

Companies in the Semiconductor industry may face risks related to sourcing certain materials due to the low substitution ratio of these inputs, the concentration of deposits in only a few countries, the environmental or social implications of extraction, and geopolitical considerations. Rare substances such as tungsten, of which China

³⁶ TC0201-12: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

³⁷ TC0201-13: Discussion of the management of risks associated with the use of critical materials and conflict minerals

³⁸ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction

³⁹ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

maintains more than 86 percent market share, are used in industry products, such as microprocessors.⁴⁰ Recycling rates of these substances are typically not high enough to meet global demand, therefore extraction and processing of new deposits is required. Some countries impose production controls and export restrictions such as quotas and tariffs, which, in light of increasing demand for these materials, have had a significant impact on price and availability. For example, between 2010 and 2011, the price of rare earth metals doubled due to fears of Chinese export quotas.⁴¹

Companies also face increasing competition for these materials due to increasing global demand from other sectors, including transportation, renewable resources, and technology and communications, which can exacerbate supply constraints. Additionally, there exists the potential for reputational harm from indirectly funding social unrest or environmental damage by purchasing materials extracted in certain regions of the world.

Stakeholder Consultation

Investors: A limited number of investors commented that disclosure pertaining to conflict minerals is not likely to be a focal point in their investment decisions, and believed resource constraints are more likely to cause financial impacts.

Issuers: A limited number of issuers that participated in consultation commented that conflict minerals disclosure is not relevant and not likely to result in material financial impacts or reputational impacts, despite regulatory reporting requirements. Issuers further indicated that the sourcing of certain materials could be material.

Benefits

Improves the SASB standard: The proposed changes improve the relevance and likely materiality of the Supply Chain Management & Materials Sourcing topic.

⁴⁰ Ron Jones, "Conflict Minerals and the Semiconductor Supply Chain," *Semi*, June 30, 2014, accessed August 11, 2017, <http://www.semi.org/en/node/50316>.

⁴¹ *Ibid.*



TECHNOLOGY & COMMUNICATIONS SECTOR

TELECOMMUNICATIONS SERVICES INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #TC0301

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October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #3-10 – **Industry:** Telecommunications Services; **Topic Name:** Environmental Footprint of Operations

2017 Technical Agenda Item #3-10 Description

SASB is evaluating the revision of the technical protocol for metric TC0301-01⁴² to ensure the completeness of the metrics associated with the topic.

Summary of Change – Revise Topic

The SASB proposes revising the technical protocol associated with provisional metric TC0301-01 to ensure that international measures of renewable energy—such as Guarantees of Origin (GOs), the EU equivalent of the United States’ RECs (both units of renewable energy units)—are accounted for.

Description of Topic

The Telecommunications industry provisional standard includes a topic, Environmental Footprint of Operations, with associated metrics to describe a company’s management of energy and water issues related to their data center operations. Specifically, provisional metric TC0301-01 specifies that issuers should disclose the total amount of energy they use, along with the percentages of that energy from the grid or renewable sources, and the amount of energy consumed by cellular and fixed networks. The provisional technical protocol describes how the issuer should calculate renewable energy, including the treatment of renewable energy units. Although the provisional technical protocol provides measurable, relevant guidance, it lacks references to renewable energy standards outside the United States. To ensure the completeness of the technical protocol, the SASB proposes revising the protocol to include references to these other equivalent standards—notably, the Guarantees of Origin (GOs) of the European Union.

Evidence

Companies with a global footprint are likely to have RECs, GOs, and other equivalent foreign renewable energy units on their books; this technical protocol update would provide clarity that the SASB recognizes GOs and other equivalents for reporting purposes. Companies commonly report aggregated renewable energy units, including equivalents (for which the revised technical protocol will outline guidance). Renewable energy units in different markets have subtle differences, but ultimately each is equivalent to 1 MWh of renewable energy produced, and have similar requirements for retirement (so that they cannot be double-counted). For example, the EU guideline 2009/28/EC mandated the creation of national registries for the trade of GOs. Updating the technical protocol to account for foreign renewable energy markets will help the technical protocol better fulfill the SASB’s attribute of completeness by providing a complete set of factors that are relevant to the subject matter.

Stakeholder Consultation

Investors: The proposed change was presented to investors and no feedback was received.

Issuers: Multiple issuers at global companies raised the concern that the current technical protocol did not recognize renewable energy standards outside of the U.S., and expressed a desire to ensure associated disclosures reflect the full extent of their renewable energy efforts.

⁴² TC0301-01: Total energy consumed, percentage grid electricity, percentage renewable energy; amount of energy consumed by (a) cellular and (b) fixed networks

Benefits

Improves the SASB standard: The inclusion of internationally recognized renewable energy units beyond RECs improves the completeness of the technical protocol associated with the metric by explicitly acknowledging their place in the market as well as their applicability to companies with different geographic profiles.

Improves alignment: Issuers are currently using renewable energy credit frameworks beyond just RECs; this update will improve SASB's alignment with these other frameworks.

Proposed Update #3-11 – **Industry:** Telecommunications Services; **Topic Name:** Data Privacy

2017 Technical Agenda Item #3-11 Description

SASB is evaluating the revision of metric TC0301-05⁴³ to ensure the completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

The SASB proposes revising provisional metric TC0301-05 from “Number of government or law enforcement requests for customer information, percentage resulting in disclosure” to “Number of government or law enforcement requests for customer information, number of records requested, percentage resulting in disclosure.”

Description of Topic

The Telecommunications industry provisional standard includes a topic, Data Privacy, with associated metrics that describe a company’s management of risks related to the storage and protection of its users’ sensitive data. The provisional metric is ambiguous in terms of what data are being asked for. Specifically, the technical protocol of the provisional metric does not satisfy two technical protocol attributes, including measurability and completeness. The proposed revision will eliminate ambiguity regarding what data are being asked for by clarifying that the number of unique data security breaches shall be disclosed, thereby improving the measurability and completeness of the metric. Furthermore, the proposed revised metric will provide more useful information by including the number of customers affected by such data security breaches—a critical element to understand the magnitude of breaches. The proposed metric benefits from being more aligned with current corporate disclosures on the topic than the current metric. Overall, the proposed metric will better accomplish the core objectives of the standard by clarifying that the number of unique incidents is to be disclosed, which improves the measurability and completeness of the associated technical protocol, as well as the inclusion of the number of customers affected by such incidents, which will improve the usefulness of the metric.

Evidence

The provisional metric does not present a fair representation of a company’s performance with respect to data privacy, as it obfuscates the number of records that a government or law enforcement entity has requested (e.g., one request could ask for one record, or for thousands). More than 35 companies in the technology and communications sector issue standalone transparency reports that address this issue and break out the information in this manner.

All five of the largest telecommunications companies issue transparency reports.⁴⁴ However, unlike companies in the Internet Media & Services industry or the Software & IT Services industry, telecommunications companies tend to break out requests by legal type (in this case Subpoenas, Court Orders, Search Warrants, National Security Demands, etc.—information which likely is not useful for investors with respect to understanding data privacy risk) but not by

⁴³ TC0301-05: Number of government or law enforcement requests for customer information, percentage resulting in disclosure

⁴⁴ “Transparency Report,” AT&T, February 2017, accessed July 15, 2017, <http://about.att.com/content/dam/csr/Transparency%20Reports/Feb-2017-Transparency-Report.pdf>; “United States report” Verizon 2016, accessed July 18, 2017, <http://www.verizon.com/about/portal/transparency-report/us-report/>; “T-Mobile Transparency Report for 2015,” T-Mobile, 2015, accessed July 12, 2017, <https://newsroom.t-mobile.com/content/1020/files/2015TransparencyReport.pdf>; “Sprint Corporation Transparency Report,” Sprint, July 2016, accessed July 15, 2017, <http://goodworks.sprint.com/content/1022/files/Transparency%20Report%20July2016.pdf>; Kate Hughes, “Our Latest Transparency Report,” July 31, 2015, accessed July 11, 2017, <https://exchange.telstra.com.au/our-latest-transparency-report/>

number of accounts affected. As transparency reports in other industries demonstrate, there can be a significant difference between the number of requests and the number of accounts affected (e.g., in a major internet media and services company's latest report this gap was over 15,000).⁴⁵ Adding the proposed metric, which breaks out the number of records requested, will improve alignment with current best practices across the sector as well as improve the completeness of the set of disclosures related to Data Privacy.

Stakeholder Consultation

Investors: Investors were supportive of changes that improve alignment with what companies currently disclose.

Issuers: The SASB contacted five issuers in the industry during consultation to obtain input on the provisional standard. While three of these issuers were provided with briefings on the standard, none provided specific input.

Benefits

Improves the SASB standard: This metric revision will improve the completeness of the standard.

Improves alignment: Issuers currently report the information broken out by number of requests and number of records requested.

⁴⁵ "Google Transparency Report," Google, Inc. 2017, accessed July 9, 2017, <https://www.google.com/transparencyreport/userdatarequests/data/>.

Proposed Update #3-12 – **Industry:** Telecommunications Services; **Topic Name:** Data Security

2017 Technical Agenda Item #3-12 Description

SASB is evaluating the addition of a metric to ensure the completeness of the metrics associated with the topic.

Summary of Change – Add Metric

The SASB proposes adding a new metric, “Percentage of operations, by revenue, independently certified to a suitable third-party cybersecurity management standard.”

Description of Topic

The Telecommunications Services industry provisional standard includes a topic, Data Security, which is focused on a company’s ability to protect the data of its customers. The two associated metrics describe a company’s performance as it relates to this issue. Specifically, quantitative metric TC0301-06 asks for a company’s past track record with data breaches, as well as the percentage of data breaches that contained customers’ personally identifiable information. Qualitative metric TC0301-07 asks companies to describe their strategy to approaching data security risks. Companies have a range of performance when it comes to cyber preparedness, and from qualitative descriptions alone it can be difficult to compare relative cyber risks. The addition of a quantitative metric which recommends the disclosure of the percentage of a company’s operations, by revenue, independently certified to a suitable third-party security standard will provide a more useful, and complete view of issuer cybersecurity practices that is aligned with external standards.

Evidence

While provisional metric TC0301-07 asks companies to discuss their cybersecurity strategies, this new metric will provide an additional quantitative indicator of company data security performance, which is useful and complete. The technical protocol to the metric requires issuer disclosure to be normalized by total revenue in order to provide a better understanding of the extent to which issuer operations are in compliance with a third-party cybersecurity management standard.

The technical protocol of the proposed metric references third-party standards, including ISO 27001, which is commonly used by companies in the industry. Three of the five largest telecom companies reference integrating third-party cybersecurity standards, including ISO 27001, into their business to some degree. For example, 301 “transport, storage and communication” companies (which include telecommunications companies) use the standard, a 400 percent increase over the past decade.⁴⁶ The second largest telecommunications services company (by market cap) notes the specific services and geographic locations to which its ISO 27001 certification applies.⁴⁷ Further, the largest telecommunications services company (by market cap) will issue press releases when a new site receives this certification, indicating its importance.⁴⁸ It also discloses that it has globally certified its data centers to ISO 27001.⁴⁹

⁴⁶ “3. ISO/IEC 27001 – data per country and sector 2006 to 2015,” ISO Standards Development, March 21, 2017, accessed July 12, 2017, <http://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1>.

⁴⁷ “Verizon Achieves Distinguished ISO/IEC 27001:2005 Certification for Information Security Management,” Verizon, October 11, 2011, accessed July 15, 2017, <https://www.verizon.com/about/news/press-releases/verizon-achieves-distinguished-isoiec-270012005-certification-information>.

⁴⁸ Ibid.

⁴⁹ “Network Security,” AT&T, accessed July 18, 2017, <http://www.about.att.com/content/csr/home/issue-brief-builder/people/network-security.html>.

Another major telecommunications services company also issues press releases as new offices and data centers become ISO 27001 certified.⁵⁰

While metric TC0301-07 asks companies to discuss their cybersecurity strategies, this new metric would provide a quantitative, and therefore distributive and comparable performance indicator to compare a company to peers.

Stakeholder Consultation

Investors: Multiple investors agreed that data security deserves increased attention and that management indicators are the best approach to quantify this topic. Investors noted that companies should have an externally verified cybersecurity framework, and the percentage of operations evaluated in this way is crucial to understanding the magnitude of the related risk.

Others: The proposed metric was discussed with multiple subject matter experts who believe it to be a good proxy for corporate data security performance.

Benefits

Improves the SASB standard: This quantitative metric would add a useful, aligned, and complete metric to the data security standard.

Improves decision-usefulness: Adding a forward-looking quantitative metric will help investors assess the cyber risks of their holdings.

Improves alignment: This metric will use strong certifications, including the ISO 27001 family, that are already being used by leading companies.

⁵⁰ Alisha Deboer, "ISO 27001: More Than a Data Center Standard," CenturyLink Business, August 20, 2013, accessed July 20, 2017, <http://www.centurylink.com/business/enterprise/blog/thinkgig/iso-27001-more-than-a-data-center-standard/>.

Proposed Update #3-13 – **Industry:** Telecommunications Services; **Topic Name:** Data Security

2017 Technical Agenda Item #3-13 Description

SASB is evaluating the revision of metric TC0301-06⁵¹ to ensure the usefulness and completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

SASB proposes revising provisional metric TC0301-06 from “Number of data security breaches and percentage involving customers’ personally identifiable information” to “Number of data security breaches, percentage involving customers’ personally identifiable information (PII), number of customers affected.”

Description of Topic

The Telecommunications Services industry provisional standard includes a topic, Data Security, with associated metrics that describe a company’s management of risks related to the storage and protection of its users’ sensitive data. The provisional metric is ambiguous in terms of what data are being asked for. Specifically, the technical protocol of the provisional metric does not satisfy two technical protocol attributes, including measurability and completeness. The proposed revision will eliminate ambiguity regarding what data are being asked for by clarifying that the number of unique data security breaches shall be disclosed, thereby improving the measurability and completeness of the metric. Furthermore, the proposed revised metric will provide more useful information by including the number of customers affected by such data security breaches—a critical element to understand the magnitude of breaches. The proposed metric benefits from being more aligned with current corporate disclosures on the topic than the current metric. Overall, the proposed metric will better accomplish the core objectives of the standard by clarifying that the number of unique incidents is to be disclosed, which improves the measurability and completeness of the associated technical protocol, as well as the inclusion of the number of customers affected by such incidents, which will improve the usefulness of the metric.

Evidence

The technical protocol associated with the provisional metric does not satisfy the measurability and completeness attributes of a technical protocol, as it does not specify what is intended to be measured by “number of data security breaches.” This may include number of unique instances of breaches, or it may include the number of exposed customer records. For example, if a company faced two cyber-attacks during the reporting period, with one exposing 200,000 customer records, and another exposing 50,000 customer records, the provisional metric is unclear whether the company would report this as “2” or “250,000.” Evidence shows that both the number of incidents and the number of customers affected are useful data points for understanding the frequency and magnitude of data security breaches.

Furthermore, an analysis of corporate disclosures demonstrates that, broadly speaking, this structure of disclosure that includes the number of incidents and the number of customers affected is a best practice for corporate disclosures. For example, after their own major breaches, some of the largest publicly-listed companies⁵² in the technology sector

⁵¹ TC0301-06: Number of data security breaches and percentage involving customers’ personally identifiable information

⁵² Brad Arkin, “Important Customer Security Announcement,” Adobe, October 3, 2013, accessed August 8, 2017, <https://blogs.adobe.com/conversations/2013/10/important-customer-security-announcement.html>.

revealed, for the respective incidents, the number of customers affected. One company's public disclosure after a data breach provides an illustrative example of the alignment of the proposed change with current corporate disclosures on the topic. In 2016, the company disclosed an unauthorized data breach associated with more than 1 billion users, the largest known data breach to date. The firm's disclosure distinguished between unique incidents and number of customers' accounts compromised, consistent with the proposed metric.⁵³

Stakeholder Consultation

Investors: Many investors across multiple industries and sectors consistently communicated during SASB's consultation period that clarification of this metric was necessary—and there was strong agreement for the proposed metric.

Issuers: Multiple issuers voiced confusion over the wording of the metric in its current version and communicated that it needed to be clarified in a manner similar to the proposed revision.

Benefits

Improves the SASB standard: The proposed revision will enhance the standardization of the metric by improving the measurability and the completeness of the technical protocol.

Improves decision-usefulness: The proposed revision will generate more useful information, given that both the number of unique cyber security data breaches and the number of customers affected are important elements needed to better understand corporate performance on the topic.

⁵² Cory Scott, "Protecting Our Members," LinkedIn, May 18, 2016, accessed August 8, 2017, <https://blog.linkedin.com/2016/05/18/protecting-our-members>; "Yahoo Security Notice December 14, 2016," Yahoo, 2016, accessed July 24, 2017, <https://help.yahoo.com/kb/SLN27925.html>; Selena Larson, "Verizon data of 6 million users leaked online," CNN, July 12, 2017, accessed September 1, 2017, <http://money.cnn.com/2017/07/12/technology/verizon-data-leaked-online/index.html>.

⁵³ "Yahoo Security Notice December 14, 2016," Yahoo, 2016, accessed July 24, 2017, <https://help.yahoo.com/kb/SLN27925.html>.

Proposed Update #3-14 – **Industry:** Telecommunications Services; **Topic Name:** Competitive Behavior and Open Internet

2017 Technical Agenda Item #3-14 Description

SASB is evaluating the addition of a metric to ensure the completeness of the metrics associated with the topic.

Summary of Change – Revise Metrics

The SASB proposes adding two new metrics addressing net neutrality in the new combined Telecommunications Services industry. The two new metrics include: “Average actual sustained download speed of (1) owned and commercially-associated content and (2) non-associated content” and “Discussion of risks and opportunities associated with net neutrality, paid peering, zero rating, and related practices.”

Description of Topic

SASB’s recent reorganization of its Sustainable Industry Classification System (SICS) called for the merger of the Telecommunications and Cable & Satellite industries into a combined industry called Telecommunications Services. While the majority of provisional metrics were identical between these two industries, provisional metrics related to net neutrality for the Cable & Satellite industry were not present in the Telecommunications industry. The SASB proposes retaining quantitative provisional metric SV0303-13 from Cable & Satellite (“Average actual sustained download speed of (1) owned and commercially-associated content and (2) non-associated content”) in the newly combined Telecommunications Services industry. The SASB also proposes adding a similar but expanded version of the qualitative provisional metric SV0303-14 (“Discussion of risks and opportunities associated with Open Internet Principles and other potential regulation”), also from Cable & Satellite, to reflect a broader set of related policy issues: “Discussion of risks and opportunities associated with net neutrality, paid peering, zero rating, and related practices.” The revised qualitative metric will ensure that the major related industry practices will be captured, ensuring adherence to the SASB criterion of completeness. Combined, the metrics will ensure the Telecommunications Services standard provides investors with a complete view of company performance with respect to the topic.

Evidence

The proposed metrics are intended to provide investors with decision-useful information related to company management of risks and opportunities related to net neutrality. The core of this issue is the debate over whether Internet Service Providers (ISPs) should be classified—and regulated—as telecommunication services (which is what net neutrality rules did in 2015) or as information services (how they were legally classified before 2015). Under net neutrality, ISPs are regulated as “common carriers” with the restrictions that apply (e.g., they can’t block or slow access to any specific content on the internet). When the provisional Cable & Satellite standard was issued in December 2014, the future of net neutrality was thought politically likely. Since then, a new FCC commissioner has stated his intent that the FCC will work to dismantle regulation and enforcement intended to ensure net neutrality.⁵⁴ Nevertheless, the fierce opposition from politicians and customers alike indicate that this issue is far from settled and will likely continue to reappear in public discourse and in court. As of July 2017, the FCC had received a staggering 13

⁵⁴ “Restoring Internet Freedom,” United States Federal Communications Commission, accessed July 20, 2017, <https://www.fcc.gov/restoring-internet-freedom>.

million comments related to this issue.⁵⁵ In further support of the importance of the issue to the industry, SASB's analysis of 10-Ks has found that 58 percent of companies in the cable and satellite industry disclose on net neutrality related risks.

To capture and communicate performance on this issue, the two proposed metrics will provide insight into business model risk associated with the topic. Specifically, the quantitative metric will provide investors with an understanding of how companies are or are not incorporating elements of these policies into their business plans. The revised qualitative metric, which specifically calls for information on "net neutrality, paid peering, zero rating, and related practices" will provide investors with an understanding of company management of risks and opportunities related to the topic. Compared to the provisional qualitative metric, the proposed revised metric clarifies the types of risks and opportunities related to net neutrality that companies are seeking to manage. These metrics will provide a complete set of disclosures that enhance understanding of a company's exposure to and strategies for risks and opportunities related to net neutrality.

Stakeholder Consultation

Investors: Investors agreed that, although the regulatory environment is likely to get significantly laxer in the short-term, this is a high-profile and highly contested topic and that greater insight into how companies are addressing it would provide decision-useful information.

Issuers: This item was presented to multiple issuers during consultation and no comments or concerns were received by the SASB.

Others: Multiple subject matter experts also agreed that these metrics are still pertinent for companies to report on despite the rollback in regulations. They agreed on the above proposal.

Benefits

Improves the SASB standard: This proposal ensures that the new combined Telecommunications Services industry will include metrics that appropriately communicate performance on this important issue. The wording change in the new metric clarifies the issues that are being focused on and help ensure the completeness of disclosure.

⁵⁵ "Restoring Internet Freedom Filings," United States Federal Communications Commission, accessed July 20, 2017, https://www.fcc.gov/ecfs/search/filings?proceedings_name=17-108&sort=date_disseminated_DESC.



TECHNOLOGY & COMMUNICATIONS SECTOR

INTERNET MEDIA & SERVICES INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #TC0401

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #3-15 – **Industry:** Internet Media & Services; **Topic Name:** Environmental Footprint of Hardware Operations

2017 Technical Agenda Item #3-15 Description

SASB is evaluating the revision of the technical protocol for metric TC0401-01⁵⁶ to align with international standards.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with provisional metric TC0401-01 to ensure that international measures of renewable energy—such as Guarantees of Origin (GOs), the EU equivalent of the United States’ RECs (both units of renewable energy credits)—are accounted for.

Description of Topic

The Internet Media & Services industry provisional standard includes a topic, Environmental Footprint of Hardware Infrastructure, with associated metrics to describe a company’s management of energy and water issues related to their data center operations. Specifically, provisional metric TC0401-01 specifies that issuers should disclose the total amount of energy they use, along with the percentages of that energy from the grid or renewable sources, respectively. The provisional technical protocol describes how the issuer should calculate renewable energy, especially the treatment of renewable energy credits. Although the provisional technical protocol provides measurable, relevant guidance, it lacks references to renewable energy units outside the United States. To ensure the completeness of the technical protocol, the SASB proposes revising the protocol to include references to these other equivalent standards—notably, the Guarantees of Origin (GOs) of the European Union.

Evidence

Companies with a global footprint are likely to have RECs, GOs, and other equivalent foreign renewable energy units on their books; this technical protocol update would provide clarity that the SASB recognizes GOs and other equivalents for reporting purposes. Companies commonly report aggregated renewable energy units, for which the technical protocol will outline guidance. For example, the largest (by market cap) internet media and services company’s 2016 Environmental Report notes: “Physical energy bundled with its ‘renewable certification’: We purchase both the physical electricity and its corresponding ‘bundled’ certification of renewable energy—a Renewable Energy Certificate (REC) in the United States or a Guarantee of Origin (GoO) in Europe—which represents the ‘greenness’ of the power.”⁵⁷ Renewable energy certificates in different markets have subtle differences, but ultimately each is equivalent to 1 MWh of renewable energy produced, and has similar requirements for retirement (so that they cannot be double-counted). For example, the EU guideline 2009/28/EC mandated the creation of national registries for the trade of GOs.⁵⁸ Updating the technical protocol to account for foreign renewable energy markets will help the metric better fulfill the SASB’s attribute of completeness by providing a complete set of factors that are relevant to the subject matter.

⁵⁶ TC0401-01: Total energy consumed, percentage grid electricity, percentage renewable energy

⁵⁷ “Environmental Report,” Google, Inc., 2015, accessed July 20, 2017, <https://static.googleusercontent.com/media/www.google.com/en/green/pdf/google-2016-environmental-report.pdf>.

⁵⁸ “Directive 2009/28/EC of the European Parliament and of the Council,” April 23, 2009, *Official Journal of the European Union*, <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009L0028>.

Stakeholder Consultation

Investors: The proposed change was presented to investors and no positive or negative feedback was received.

Issuers: This concern was raised by multiple issuers at global companies who wanted to ensure their reporting reflects the full extent of their renewable energy efforts.

Benefits

Improves the SASB standard: The inclusion of internationally recognized renewable energy units beyond RECs improves the completeness of the technical protocol associated with the metric by explicitly acknowledging their place in the market as well as their applicability to companies with different geographic profiles.

Improves alignment: Issuers are currently using renewable energy credit frameworks beyond just RECs and this update will improve SASB's alignment with these other frameworks.

Proposed Update #3-16 – **Industry:** Internet Media & Services; **Topic Name:** Data Privacy, Advertising Standards, and Freedom of Expression

2017 Technical Agenda Item #3-16 Description

SASB is evaluating the revision of metric TC0401-07⁵⁹ to ensure the completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

The SASB proposes revising provisional metric TC0401-07 from “Number of government or law enforcement requests for customer information, percentage resulting in disclosure” to “Number of government or law enforcement requests for customer information, number of records requested, percentage resulting in disclosure.”

Description of Topic

The Internet Media & Services industry provisional standard includes a topic, Data Privacy, Advertising Standards, and Freedom of Expression, with associated metrics to describe a company’s management of risks related to how it stores and protects its customers’ sensitive data. Specifically, provisional metric TC0401-07 asks companies to disclose governmental and law enforcement requests for information. The revision of the metric to include the disclosure of the number of records requested will eliminate ambiguity in the information that would be elicited by the provisional metric. Further, it would mirror the way companies currently disclose this information, thereby providing a fairer and more complete representation of performance and better accomplishing the core objectives of the standard by offering investors a more decision-useful set of disclosures when combined with the existing metrics related to the topic.

Evidence

The provisional metric does not present a fair representation of a company’s performance with respect to Data Privacy, Advertising Standards, and Freedom of Expression, as it obfuscates the number of records that a government or law enforcement entity has requested (e.g., one request could ask for one record, or for thousands). More than 35 companies in the technology and communications sector issue standalone transparency reports that address this issue and break out the information in this manner.

The largest company in the industry currently breaks out both “user data requests” and “users/accounts specified” by country. For example, in the second half of 2016, the company was served 7,855 subpoenas, with 14,897 accounts specified.⁶⁰ Both numbers are needed to adequately understand the magnitude of impact. The second largest company in this industry breaks out “Total Requests for User Data” and “Total User Accounts Referenced.” In the second half of 2016, these figures (for the U.S.) were 26,014 and 41,492, respectively.⁶¹ While only two of the top five companies by market cap produce these transparency reports, these two companies represent 70 percent of the market capitalization of this SICs industry. A broad review of current issuer disclosure identified that the proposed metric is aligned with existing company disclosures related to this topic.

⁵⁹ TC0401-07: Number of government or law enforcement requests for customer information, percentage resulting in disclosure

⁶⁰ “Google Transparency Report,” Google Inc., accessed July 20, 2017, <https://www.google.com/transparencyreport/userdatarequests/data/>.

⁶¹ “Government Requests Report,” Facebook, accessed July 18, 2017, <https://govtrequests.facebook.com/>.

The reporting of both of these data points by the two largest companies in the industry, by market cap, highlights the importance of both figures to describe the scope of company performance with respect to law enforcement requests for information. Adding the proposed metric will improve alignment with current industry practices as well as improve the completeness of the set of disclosures related to Data Privacy, Advertising Standards, and Freedom of Expression.

Stakeholder Consultation

Investors: Investors were supportive of changes that improve alignment with what companies currently disclose.

Issuers: The SASB contacted four issuers in the industry during consultation to obtain input on the provisional standard. While one of these issuers was provided with a briefing on the standard and it proceeded to provide specific input and suggest one or more revisions, the SASB did not focus such outreach efforts on this aspect of the standard.

Benefits

Improves the SASB standard: This metric revision will improve the completeness of the standard.

Improves alignment: Issuers currently report the information broken out by number of requests and number of records requested.

Proposed Update #3-17 – **Industry:** Internet Media & Services; **Topic Name:** Data Security

2017 Technical Agenda Item #3-17 Description

SASB is evaluating the addition of a metric to ensure the completeness and usefulness of the metrics associated with the topic.

Summary of Change – Add Metric

SASB is evaluating the addition of a metric to the Data Security topic describing “Percentage of operations, by revenue, independently certified to a suitable third-party cybersecurity management standard.”

Description of Topic

The current Internet Media & Services SASB industry standard includes a topic for Data Security, which describes a company’s ability to protect the data of its customers. The two-associated metrics describe a company’s performance as it relates to this topic. Specifically, quantitative metric TC0401-10 asks for a company’s past track record with data breaches, as well as the percentage of data breaches that contained customers’ personally identifiable information. Qualitative metric TC0401-11 asks companies to describe their strategy to approaching data security risks. Companies have a range of performance when it comes to cyber preparedness, and from qualitative descriptions alone it can be difficult to compare relative cyber risks. The addition of a quantitative metric which recommends the disclosure of the percentage of a company’s operations, by revenue, independently certified to a suitable third-party security standard will provide a more useful, and complete view of issuer cybersecurity practices that is aligned with external standards.

Evidence

While provisional metric TC0401-11 asks companies to discuss their cybersecurity strategies, this new metric will provide an additional quantitative indicator of company data security performance, which is useful and complete. The technical protocol to the metric requires issuer disclosure to be normalized by total revenue in order to provide a better understanding of the extent to which issuer operations are in compliance with a third-party cybersecurity management standard.

The technical protocol of the proposed metric references third-party standards, including ISO 27001, which is commonly used by companies in the industry. The largest company in this industry notes that for its Cloud Platform, it uses ISO 27001, which it refers to as “one of the most widely recognized, internationally accepted independent security standards.”⁶² This company alone constitutes 40 percent of the market cap of this SIC industry. Though more companies in this industry may currently use this standard, SASB is broadly unable to ascertain how much of the rest of the industry does so.

Stakeholder Consultation

Investors: Multiple investors agreed that data security deserves increased attention and that management indicators are the best approach to quantify this topic. Investors noted that companies should have an externally verified cybersecurity framework, and the percentage of operations evaluated in this way is crucial to understanding the magnitude of the related risk.

⁶² “Google Cloud Platform and the EU Data Protection Directive,” Google, Inc. accessed July 20, 2017, <https://cloud.google.com/security/compliance/eu-data-protection/>.

Others: The proposed metric was suggested by and discussed with subject matter experts who believe it to be a good proxy for corporate data security performance.

Benefits

Improves the SASB standard: This quantitative metric would add a useful, aligned, and complete metric to the data security standard.

Improves decision-usefulness: Adding a forward-looking quantitative metric will help investors assess the cyber risks of their holdings.

Proposed Update #3-18 – **Industry:** Internet Media & Services; **Topic Name:** Data Security

2017 Technical Agenda Item #3-18 Description

SASB is evaluating a revision of metric TC0401-10⁶³ to ensure the usefulness and completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

SASB proposes revising provisional metric TC0401-10 from “Number of data security breaches and percentage involving customers’ personally identifiable information” to “Number of data security breaches, percentage involving customers’ personally identifiable information (PII), number of customers affected.”

Description of Topic

The Internet Media & Services industry provisional standard includes a topic, Data Security, with two associated metrics that describe a company’s management of risks related to the storage and protection of its users’ sensitive data. The provisional metric is ambiguous in terms of what data are being asked for. The proposed revision will eliminate ambiguity regarding what data are being asked for by clarifying that the number of unique data security breaches shall be disclosed, thereby improving the measurability and completeness of the metric. Furthermore, the proposed revised metric will provide more useful information by including the number of customers affected by such data security breaches—a critical element to understand the magnitude of breaches. The proposed metric is more aligned with current corporate disclosures on the topic than the current metric.

Evidence

The technical protocol associated with the provisional metric does not satisfy the measurability and completeness attributes of a technical protocol, as it does not specify what is intended to be measured by “number of data security breaches.” This may include number of unique instances of breaches, or it may include the number of exposed customer records. For example, if a company faced two cyber-attacks during the reporting period, with one exposing 200,000 customer records, and another exposing 50,000 customer records, the provisional metric is unclear whether the company would report this as “2” or “250,000.” Evidence shows that both the number of incidents and the number of records affected are useful data points for understanding the frequency and magnitude of data security breaches.

Furthermore, an analysis of corporate disclosures demonstrates that, broadly speaking, this structure of disclosure that includes the number of incidents and the number of customers affected is a best practice for corporate disclosures. For example, after their own major breaches, some of the largest publicly-listed companies⁶⁴ in the technology sectors revealed, for the respective incidents, the number of customers affected. One company’s public disclosure after a data breach provides an illustrative example of the alignment of the proposed change with current corporate disclosures on the topic. In 2016, the company disclosed an unauthorized data breach associated with more

⁶³ TC0401-10: Number of data security breaches and percentage involving customers’ personally identifiable information

⁶⁴ Brad Arkin, “Important Customer Security Announcement,” Adobe, October 3, 2013, accessed August 8, 2017, <https://blogs.adobe.com/conversations/2013/10/important-customer-security-announcement.html>.

⁶⁴ Cory Scott, “Protecting Our Members,” LinkedIn, May 18, 2016, accessed August 8, 2017, <https://blog.linkedin.com/2016/05/18/protecting-our-members>; “Yahoo Security Notice December 14, 2016,” Yahoo, 2016, accessed July 24, 2017, <https://help.yahoo.com/kb/SLN27925.html>; “Verizon data of 6 million users leaked online,” CNN, July 12, 2017, accessed September 1, 2017, <http://money.cnn.com/2017/07/12/technology/verizon-data-leaked-online/index.html>.

than 1 billion users, the largest known data breach to date. The firm’s disclosure distinguished between unique incidents and number of customers’ accounts compromised, consistent with the proposed metric.⁶⁵

Stakeholder Consultation

Investors: Three investors across multiple industries and sectors consistently communicated during the SASB’s consultation period that clarification of this metric was necessary—and there was strong agreement for the proposed metric.

Issuers: Multiple issuers in the industry voiced confusion over the wording of the metric in its current version and communicated that it needed to be clarified in a manner similar to the proposed revision.

Benefits

Improves the SASB standard: The proposed revision will enhance the standardization of the metric by improving the measurability and the completeness of the technical protocol.

Improves decision-usefulness: The proposed revision will generate more useful information, given that both the number of unique cyber security data breaches and the number of customers affected are important elements needed to better understand corporate performance on the topic.

⁶⁵ “Yahoo Security Notice December 14, 2016,” Yahoo, 2016, accessed July 24, 2017, <https://help.yahoo.com/kb/SLN27925.html>.