



SASB XBRL Preparer Guide

February 2021

Version: Draft 2021-02

Prepared by the Sustainability Accounting Standards Board®

Table of Contents

SAS	B XBRL Preparer Guide	3
1.1		
1.1.1		
1.2		
1.3		
1.3.1		
1.3.2		
1.3.3		
1.4	·	
1.4.1		
1.4.2	·	
1.4.3		
1.4.4		
1.4.5		
1.4.6		
1.5	XBRL Document Preparation and Filing	12
1.6	· ·	
1.7		
1.7.1	·	
1.7.2		
Taxo		
2.1		
2.2		
	1.1 1.1.1 1.2 1.3 1.3.1 1.3.2 1.3.3 1.4 1.4.3 1.4.4 1.4.5 1.4.6 1.7 1.7.1 1.7.2 Taxo	1.1.1 Revision History

1 SASB XBRL Preparer Guide

1.1 Goals

The Sustainability Accounting Standards Board (SASB) XBRL Preparer Guide is intended to provide an understanding of how to create XBRL and/or inline XBRL (iXBRL) reports using SASB's XBRL Taxonomy (i.e., SASB Taxonomy). This document will offer a brief overview of XBRL and the structure of the SASB Taxonomy, indicate the way in which the taxonomy represents and validates the data necessary in an XBRL report, and explore how to submit this report to regulatory agencies or make available to XBRL data consumers.

This document is meant to be read by companies that report environmental, social, and corporate governance (ESG) metrics using the <u>SASB Standards</u> who would like to report this data in an XBRL format as well. Before reading this document, readers should be familiar with XBRL, ESG, and the SASB Standards for their particular industry.

1.1.1 Revision History

This document is subject to periodic revision. This is the first version of this document. Any modifications to this document will be posted on <u>SASB's website</u>.

1.2 Introduction to the Taxonomy and an Overview of XBRL

The SASB Taxonomy was designed for companies to report their ESG information that follows SASB Standards in a structured, machine-readable data format (i.e., XBRL) to the investor and analyst community and other users of companies' non-financial information. The intent is for companies to 'digitally tag' ESG information within their current reporting format, which may include regulatory filings (e.g., Forms 10-K/Q with the US SEC, foreign equivalents, etc.), Corporate Social Responsibility reports, or other reporting channels.

XBRL (the Extensible Business Reporting Language) is a means of expressing and exchanging business information (in this case ESG information) in a structured, standardized format that allows semantic meaning and data dimensionality to be attached to each XBRL fact (e.g., each SASB metric). XBRL is self-describing, which means nothing beyond the XBRL report and the taxonomy that was used to create it is necessary for the receiving system to understand and interpret the data report. Along that vein, it is also machine-readable, allowing the receiving system to parse discrete facts, interpret their meaning and relationship with other facts, and apply that information to consumer data models. Inline XBRL or iXBRL format is also human-readable and allow rendering of human-readable presentations.

For more background information on XBRL, please refer to this <u>introduction to XBRL</u> from XBRL International.

1.3 Transforming ESG Data to XBRL

This guide is designed to guide preparers in taking their publicly reported ESG information that follows SASB Standards and transforming that data into a well-structured, validated XBRL or iXBRL report.

This guidance is designed to accommodate the different formats of reporting a company may use, including ESG (and the associated XBRL) information that is:

- 1. Embedded within or alongside a filing with a regulatory agency (e.g., a filing with the SEC in US, ESMA in EU or FSA in Japan)
- 2. Reported within a PDF, or similar format, on a company's website (e.g., a Corporate Social Responsibility report)

Additionally, we encourage companies to report their ESG information inline with the human-readable ESG information (i.e., iXBRL). Alternatively, companies may choose to report the XBRL documents alongside their human-readable ESG information as separate XBRL files (e.g., XBRL as XML).

1.3.1 Originating ESG Information

The source of the data that is intended to be represented in an XBRL format using the SASB Taxonomy is a company's ESG information (regardless of report format as noted above) that follows SASB Standards.

The data that preparers need to represent in their XBRL reports is data with which they are already familiar. This preparer's guide explains how that data relates to and is represented by the SASB Taxonomy. As mentioned previously, users of this document should be familiar with the SASB Standards.

1.3.2 Reporting format

The SASB Taxonomy is, by design, agnostic to the reporting format.

In instances where the ESG information is embedded within or alongside a regulatory filing (e.g., an SEC filing), all applicable rules of the regulatory body (e.g., US SEC) should be followed. In those instances, the XBRL instance and associated linkbases should follow the requirements of the particular agency. For example, the particular format of the XBRL instance document and required linkbases may be governed by the regulatory agencies. Companies should consult their compliance team to ensure that they are following all required laws and regulations. This document is not and should not be perceived as providing authoritative filing guidance for use with specific regulatory agencies.

If the ESG XBRL information will be reported as a standalone document (e.g., on the company's website) not subject to any particular regulatory requirements, then we recommend an iXBRL

report format to optimize usability. The recommended instance document format is an Extensible Hypertext Markup Language (XHTML) format in which the ESG information is marked up using the Inline XBRL format. We recommend that preparers follow the recommendations of the XBRL International Working Group, which indicates how Inline XBRL documents should be included within a taxonomy package. Many of the XBRL based reporting platforms have the ability to create XBRL documents in this format.

1.3.3 Preparation Software

SASB did not create specific software for companies to use to prepare their XBRL documents for ESG information. Many of the existing XBRL based reporting platforms have the ability to create XBRL documents, including many that can create the recommended iXBRL format discussed in the subsection above.

1.4 The Data Model

The following section describes the data model represented by the SASB Taxonomy.

1.4.1 Entry Points and Presentations

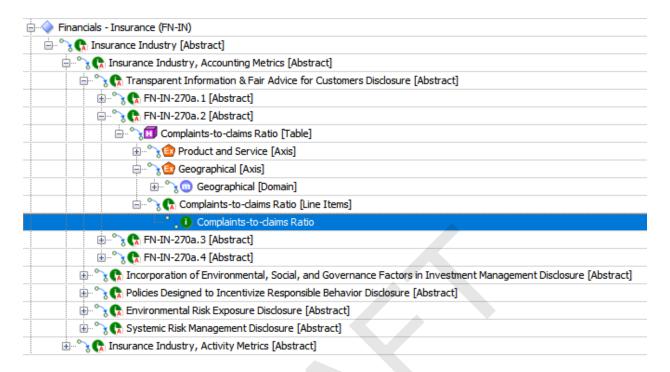
The SASB Taxonomy has the following entry points:

- https://www.sasb.org/xbrl/taxonomy/cor/sasb-entryPoint-all.xsd entry point including the SASB Taxonomy, the General Information taxonomy, and concepts to report recommended Task Force on Climate-related Financial Disclosures (TCFD) information.
- https://www.sasb.org/xbrl/taxonomy/cor/sasb.xsd entry point to the SASB Taxonomy, which represents the SASB accounting and activity metrics for 77 industries
- https://www.sasb.org/xbrl/taxonomy/cor/sasb-dei.xsd entry point to the General Information related concepts for companies to report general information about their report (e.g. company name, country, etc.)
- https://www.sasb.org/xbrl/taxonomy/cor/tcfd.xsd entry to the concepts to report recommended Task Force on Climate-related Financial Disclosures (TCFD) information.

You can open and view the taxonomy using an XBRL taxonomy viewer, such as the freely available <u>Arelle software</u>. Additionally, third party commercial XBRL platforms allow you to review the SASB taxonomy.

The presentation of the taxonomy (using its presentation linkbase) identifies its structure. Refer to Figure 1 below for an example of the hierarchical structure of the taxonomy.

Figure 1. Sample hierarchical structure of the SASB Taxonomy



SASB Standards include a unique set of metrics for each industry. As displayed above, presentation roles refer to each industry (e.g., Insurance). An abstract element for the industry exists (e.g., Insurance Industry [Abstract]), followed hierarchically by an abstract for the accounting metrics (e.g., Insurance Industry, Accounting Metrics [Abstract]) and the abstract for the activity metrics (e.g., Insurance Industry, Activity Metrics [Abstract]). The accounting metrics are then split by an abstract for each disclosure (e.g., Transparent Information & Fair Advice for Customers Disclosure [Abstract], and so on). Each is then followed hierarchically by an abstract for the accounting metric within the SASB Standards (e.g., FN-IN-270a.2 [Abstract]). Submetrics for the particular accounting metric are included under each accounting metric abstract.

Subsequently, in instances where a concept is intended to be reported dimensionally (e.g., for various geographical areas, by race or ethnicity, by pollutant, etc.), table structures exist within the taxonomy identifying the taxonomy-defined dimensions (e.g., members) that may be used (as seen in Figure 1 above). Refer to the section below for more information on selecting the appropriate taxonomy-defined dimensions.

1.4.2 Concepts and Dimensions

Understanding and properly selecting concepts is one of the most important steps in transforming ESG data into XBRL using the SASB Taxonomy. The presentation of the taxonomy (example above) is structured in a manner that should allow preparers to identify the necessary taxonomy concept and taxonomy-defined dimensions (e.g., any axes and members).

Additionally, the reference linkbase includes references to the specific location in the SASB Standards. For example, the following is the reference link for element ComplaintsToClaimsRatio:

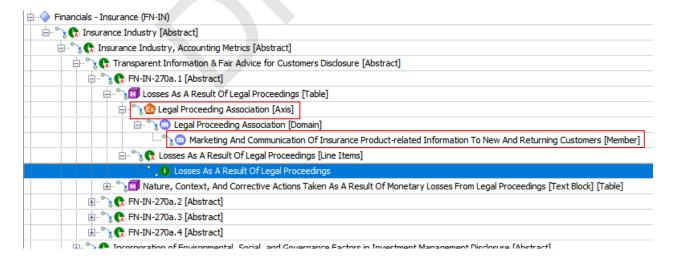
Figure 2. Example reference link for Insurance industry metric

° ₹ 1 Reference	disclosureRef	
···· Pref:Publisher		Sustainability Accounting Standards Board (SASB)
···· p ref:Name		Sustainability Accounting Standard
····· Pref:IssueDate		2018-10-01
p ref:Section		FN-IN-270a.2

Selecting the appropriate taxonomy-defined dimensions (e.g., any axes and members) is also important as it provides appropriate context for the concept selected. For example, an Insurance company reporting monetary losses for SASB metric FN-IN-270a.1¹ would report using concept sasb:LossesAsAResultOfLegalProceedings and use the following axis and member for the dimension: sasb:LegalProceedingAssociationAxis,

sasb:MarketingAndCommunicationOfInsuranceProductrelatedInformationToNewAndReturningC ustomersMember. Using this dimension makes it clear to the users of the XBRL information that the losses specifically relate to legal proceedings associated with marketing and communication of insurance product-related information to new and returning customers. The intended axes and members can be seen within the presentation linkbase of the taxonomy. For example:

Figure 3. Example of axis and member elements in the presentation linkbase



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 $^{^{1}}$ Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of insurance product-related information to new and returning customers.

1.4.3 Extending Information

SASB Standards are designed to enable comparison of performance across peer companies within an industry. Comparability is key to ensure sustainability data is decision-useful for investors. As such, SASB discourages the extension of the base SASB Taxonomy. When there is an absolute need to extend and report entity-specific information, preparers are encouraged to "anchor" following the <u>ESEF guidelines</u> on anchoring.

This section provides guidance on specific scenarios to help preparers make the best decision.

Scenario 1: Additional Narrative on Disclosure Topic.

Preparers may choose to provide additional narrative on a disclosure topic identified by SASB. This information could be in addition to what is called for by the SASB Standard. For example: In the Medical Equipment & Supplies industry, Product Safety is a disclosure topic. There are four metrics identified for this topic. If a preparer chooses to provide any additional narrative on Product Safety, then the preparer can do so using the "Product Safety Disclosure [Text Block]" as shown in Figure 4 below. Preparers should NOT extend the base taxonomy to provide such additional narrative for a disclosure topic.

─ Health Care - Medical Equipment & Supplies (HC-MS) String ☐ Medical Equipment And Supplies Industry, Accounting Metrics [Abstract] String Affordability And Pricing Disclosure [Abstract] String □ Product Safety Disclosure [Abstract] → HC-MS-250a.1 [Abstract] String **⊕** Product Recalls, Percentage [Table] NonNegativeInter Product Recalls Product Recalls, Units NonNegativeInte ─ HC-MS-250a.2 [Abstract] String ☐ Products Listed In FDA Medwatch Safety Alerts For Human Medical Products Database [Table] Table ☐ Products Listed In FDA Medwatch Safety Alerts For Human Medical Products Database [Line Items] String Products Listed In FDA Medwatch Safety Alerts For Human Medical Products Database **EnumerationSet** String HC-MS-250a.3 [Abstract] □ HC-MS-250a.4 [Abstract] String ☐ FDA Enforcement Actions Taken In Response To Violations Of Current Good Manufacturing Practices [Table] Table Axis ⊞ FDA Enforcement Actions Taken In Response To Violations Of Current Good Manufacturing Practices [Line Items] String

Figure 4. Example text block element to be used for additional narrative

Scenario 2: Additional Dimension

In certain instances, a company may have to report information for a different dimension. In those instances, the company can extend the taxonomy by creating its own company-specific dimensions.

For example: In the industry Oil & Gas – Exploration & Production (EM-EP), for the disclosure topic Reserves Valuation & Capital Expenditures, the metric EM-EP-420a.1 calls for the

preparer to use the following table to disclose the sensitivity of its hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions.

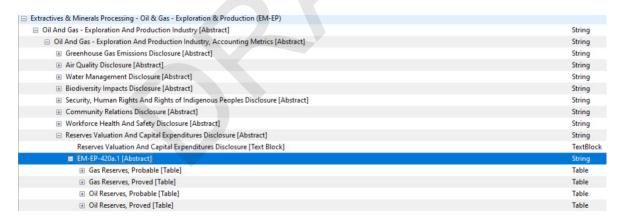
Figure 5. Table-based disclosure associated with SASB Metric EM-EP-420a.1

Table: Sensitivity of Reserves to Prices by Principal Product Type and Price Scenario

Price Case	Proved Reserves			Probable Reserves		
(Scenario)	Oil (MMbbls)	Gas (MMscf)	Product:A (measure)	Oil (MMbbls)	Gas (MMscf)	Product:A (measure)
Current						
Policies						
Scenario (base)						
New Policies						
Scenario						
Sustainable						
Development						
Scenario						

For the table in Figure 5, most preparers in the Oil & Gas - Exploration & Production industry will disclose on Oil and Gas reserves. However, some preparers may have additional hydrocarbon products. The base SASB Taxonomy does not include a dimension for additional products, as shown below (see Figure 6). In such instances, the preparer can extend the taxonomy to include the additional dimension.

Figure 6. SASB Taxonomy for the Oil & Gas - Exploration & Production industry



• Scenario 3: Optional Additional Disclosure for Metrics

In certain instances, the SASB metrics recommend that a company disclose additional optional information. In such instances, it is recommended that preparers use XBRL footnotes to provide this information. Preparers should NOT extend the base taxonomy to provide additional optional information for a metric.

For example: In the Medical Equipment & Supplies industry, for the Product Safety disclosure topic, the first metric is HC-MS-250a.1. Number of recalls issued; total units recalled. In addition to the aggregate recall numbers, the metric's underlying technical protocol recommends that the preparer disclose revenue-related information to help

investors gauge financial impact. (See Figure 7.) Such additional but optional information should be disclosed using an XBRL footnote.

Figure 7. Technical protocol for SASB Metric HC-MS-250a.1

- 8 For each recalled product, the entity may disclose revenues from 12 months prior to the date of recall. This 12-month period may extend beyond the reporting period for which the entity is disclosing; the figure is intended to indicate annual revenues associated with the product such that the financial impact of the recall can be gauged.
- 9 If a recall relates to only a subset of a product (e.g., specific lots or a particular style), then the entity should indicate the scope of the recall; and, if the entity is disclosing revenue associated with the recall, it should be limited to the portion of the product affected by the recall.
- 10 The entity shall discuss notable recalls, such as those that affected a significant number of units of one product or those related to serious injury or fatality. For such recalls the entity may provide:
 - 10.1 Description and cause of the recall issue
 - 10.2 The total number of units recalled
 - 10.3 The cost to remedy the issue
 - 10.4 Whether the recall was initiated voluntarily or at the request of the FDA or non-U.S. national regulatory authority
 - 10.5 Corrective actions

Scenario 4: Jurisdiction-Specific Disclosure for Metrics

In certain instances, the SASB-identified metric may not be aligned with local jurisdictional requirements. When the necessary concept within the XBRL taxonomy does not exist to meet the local jurisdictional requirement, the company may choose to extend this information by creating a company-specific extension. In these circumstances, preparers are encouraged to "anchor" following the ESEF guidelines on anchoring. For example: In the Medical Equipment & Supplies industry, for the Product Safety disclosure topic, the third metric is HC-MS-250a.3. Number of fatalities related to products as reported in the FDA Manufacturer and User Facility Device Experience database as shown below in Figure 8.

Figure 8. SASB metric HC-MS-250a.3 and associated technical protocol

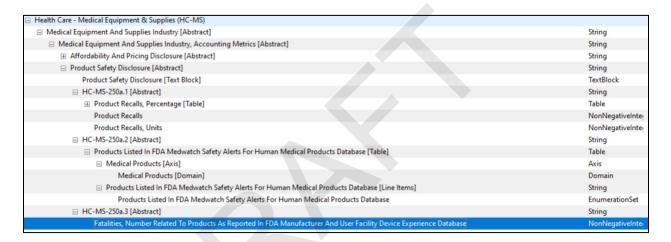
HC-MS-250a.3. Number of fatalities related to products as reported in the FDA Manufacturer and User Facility Device Experience database

- 1 The entity shall disclose the number of fatalities associated with device products it manufactures.
 - 1.1 The scope of the disclosure shall include all fatalities that occurred during the reporting period for which it is disclosing, even if the adverse event began in a prior period.
- 2 The entity may access a list of fatalities through the FDA Manufacturer and User Facility Device Experience (MAUDE) database.

For preparers outside the US, the metric shown above may not be aligned with local jurisdictional requirements. In such instances, a preparer may choose to extend the base taxonomy to align with the equivalent requirements in their local jurisdiction. Preparers are encouraged to anchor on the closest concept when they extend.

In the above example, the closest concept would be sasb:FatalitiesNumberRelatedToProductsAsReportedInFDAManufacturerAndUserFacilityDeviceExperienceDatabase as shown below.

Figure 9. Anchoring jurisdiction-specific extensions to the closest existing concept



If extending an element is necessary, companies should also consider specifying the extended element's label and documentation label (i.e., the definition of the element) and include this information in the extended label linkbase.

The table below summarizes the discussion and recommendations for taxonomy extension.

	Should Preparer Extend Base SASB Taxonomy?	Notes
Scenario 1: Additional Narrative on Disclosure Topic	No	Use narrative text block
Scenario 2: Additional Dimension	Yes	Add dimensions as needed
Scenario 3: Optional Additional Disclosure for Metrics	No	Use an XBRL footnote
Scenario 4: Local Jurisdiction Specific Disclosure for Metrics	Yes	Anchor to the closest existing Concept

1.4.4 Not Reporting a Particular Metric

If the company does not report a particular metric included in the SASB Standard for its industry, it is recommended that the company tag the concept with the nil attribute set to true and add an XBRL footnote explaining the rationale behind the concept not being reported. Companies can also choose to use the footnote to provide additional information about the fact as discussed in the subsection above.

1.4.5 Data Types and Units

Each concept has a data type associated with it, and this data type limits the data value the concept can represent. For example, monetary concepts have a data type of {http://www.xbrl.org/2003/instance}monetaryItemType. In that instance the unit of the tagged information would be a currency such as iso4217:USD. The data type for each concept differs depending on the type of information tagged.

The XBRL Units Registry (http://www.xbrl.org/utr/utr.xml) provides a centralized list of units, to promote consistent use of units across preparers and jurisdictions. SASB worked with XBRL International to include additional data units associated with SASB concepts (e.g., GigaJoule, PetaByte).

1.4.6 Identifiers

The SASB Taxonomy is agnostic to which identifier is used. If the ESG information is tagged together with non-ESG information such as within a joint filing with a regulatory agency, the identifier that is required for that agency can be used. For example, filings with the US SEC use the Central Index Key (CIK) and companies filing under EU ESEF rules use the ISO 17442 legal entity identifier. (Note: if using the ISO 17442 legal entity identifier we recommend importing the Legal Entity Identifier Taxonomy as well in the creation of your instance document.)

1.5 XBRL Document Preparation and Filing

Several existing software tools will allow you to tag your company's ESG information using the SASB Taxonomy for various reporting formats (e.g., regulatory filings, standalone reports, etc.) and XBRL formats (e.g., XBRL as XML, Inline XBRL, etc.).

It is recommended that companies use the Inline XBRL (iXBRL)² format (preferred) or the XBRL as XML³ format.

² Inline XBRL (iXBRL) allows the instance data to be embedded in an XHTML document. This is iXBRL's principal advantage, that machine-readable data is located within the human-readable report. Schema and linkbase requirements are the same as with XML.

³ With XBRL as XML, or eXtensible Mark-up Language, instance data is stored in XML format as dictated by the XBRL 2.1 Specifications. In the instance document, data is tagged using elements and attributes defined in the taxonomy XML schema. XBRL reports created in XML are generally not human-readable.

The intention of the SASB Taxonomy is for a company to report the XBRL schema information, the instance document, and, if applicable, an extended label linkbase (to include labels associated with company-specific extensions, if applicable). There is no need for a company to include an extended presentation, definition, or calculation linkbase; however, a company may choose to do so if required (e.g. in the case of a regulatory filing) or may choose to do so if they deem relevant or useful. If the ESG information is included within a regulatory report, particular extended information and linkbases may be required. Companies should ensure they are meeting all necessary regulatory requirements.

1.6 Validation

Validating an XBRL report is an essential step before submission and/or dissemination.

Software platforms used for instance creation may have built in validations such as validating that the XBRL documents are in line with the XBRL specifications. However, this alone would not mean that the information reported is complete and accurate; rather, that the information is in a proper XBRL format. As such, preparers should take care in ensuring the correctness of the information they are reporting. For example, preparers should ensure they are selecting the appropriate concepts and dimensions and reporting the information for the correct period with the accurate units, etc.

1.7 Examples

SASB has collaborated with software providers to explore how the SASB XBRL Taxonomy can be integrated into XBRL based reporting platforms to provide a seamless experience for prepares. SASB aims to work with all market participants to ensure the SASB Taxonomy is available and widely used. The examples below are not intended to be an endorsement of any software platform. Rather, they are meant to highlight how the taxonomy can be used once it is integrated into a software platform.

1.7.1 Example – Workiva WDesk Platform

In collaboration with Workiva, the initial draft version of the SASB taxonomy was integrated into the Workiva platform. Included as supplemental material is a step-by-step guide to using WDesk to create a SASB instance document.

1.7.2 Example – CoreFiling Seahorse Platform

Included as supplemental material is an introductory guide to Corefiling Seahorse platform.

2 Taxonomy Governance

This section outlines the processes and principles related to ongoing governance of SASB's XBRL taxonomy.

2.1 Taxonomy Review Committee

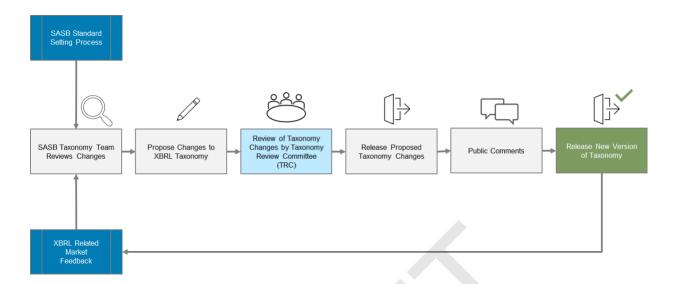
SASB hopes to establish a Taxonomy Review Committee (TRC) with representation from all key stakeholder group in the sustainability information value chain. The plan is to seek representation and participation from the following list of stakeholders.

- Filers Companies that disclosure sustainability information based on SASB standards
- Filing Software Providers Software providers that help filers publish sustainability information in XBRL compliant formats
- Assurance Providers Audit firms that ensure the accuracy of the disclosed information
- Regulators Regulatory bodies that mandate disclosure of material sustainability information
- Data Providers & Analytics Platform Providers Service providers that consume data, aggregate and provide analytics based on disclosed sustainability data.
- Investors Asset Managers and Asset Owners who consume sustainability data either through Data Providers or through direct access
- Academics & Others Interested parties who study and analyze sustainability information

2.2 Taxonomy Change Management

SASB plans to follow a structured change management process to maintain and improve the taxonomy on an ongoing basis. The ownership of the taxonomy will be with SASB. SASB has identified two important types of changes:

- XBRL taxonomy changes necessitated by changes to SASB standards SASB continues to research, improve, and update standards as needed. Details of the standard setting process can be found at https://www.sasb.org/standard-setting-process/. As changes to standards are implemented, corresponding changes to XBRL taxonomy will be implemented
- XBRL taxonomy changes necessitated by market feedback As market utilizes the taxonomy, there will
 be need for adjustments, corrections, and improvements. SASB plans to respond to this feedback in a
 timely manner.



The change management process shown above outlines the high-level process envisioned for addressing changes. SASB plans to update the change management process with greater detail once the TRC is formed and is operational. The process is also expected to undergo changes as the taxonomy matures.

For the latest information, please visit our website.