SustainableIT Standards Taxonomy

June 15, 2023 Version V1.0



This paper formally documents the SustainableIT standards taxonomy. The standards, a contextual overview, references, and a landscape graphic are all available at https://www.sustainableit.org/standards/it-esg-standards.

For more information on SustainableIT.org, see last page of this document.

Revision History

Date	Reason for Changes	Version
June 15, 2023	Metrics added: EF 220-1, EF 430-1, EF and EE 140-1	V1.0
May 12, 2023	Version one of social and governance standards published in report and prepared for posting online	V1.0
March 25, 2023	Version one of environmental standards published in report and posted online	V1.0

Note: A complete document history is maintained by the SustainableIT Standards Committee.

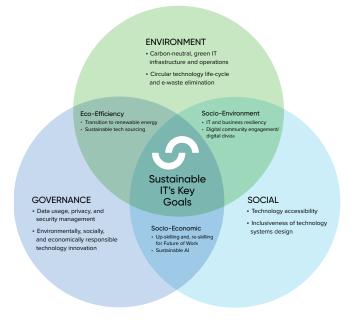
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SustainableIT Standards Quick FAQ

What is "Sustainable IT?"

Sustainable IT is the strategic leadership of enterprise technology to minimize negative and maximize positive impacts on the environment, society and governance (ESG). Key IT sustainability targets across the ESG pillars are shown in the Venn diagram.



What Are SustainableIT Standards?

The SustainableIT standards are a set of measurable topics and metrics that provide a consistent way of describing or "disclosing" a company's sustainability current state to regulatory bodies and shareholders. They are tailored to information technology and relevant to IT functions in any region, industry, and size of company.

Do Standards Set Target Quantities, e.g., 90% of Phones to be Recycled?

No, standards typically do not provide numeric goals or quantities that companies should aspire to reach. Those must be determined by companies individually, usually based on benchmarks, industry commitments, or levels set by governing institutions.

What's Special About SustainableIT's Standards?

Our IT ESG standards are tailored by IT executives for maximum relevance to enterprise IT organizations. They adapt existing standards while adding new ones to address gaps in established general standards bodies such as Global Reporting Initiative (GRI), or Sustainability Accounting Standards Board (SASB).

The SustainableIT standards are meant to empower IT leaders with a uniform foundation on which to build an action plan for sustainability in their functions, enterprises, and industries.

How Do IT Organizations Use SustainableIT's Standards?

IT leaders should select from the lists of standards any environmental, social and governance high-level topics they wish to include on their transformation agendas. These should be aligned to goals set by the enterprise. They then can drill down into each topic to choose metrics, standard units of measure, and descriptions for use in baselining, tracking, and reporting/disclosing.

SustainableIT Standards in Context

Why Does IT Need Sustainability Standards?

Today, there is a complex web of semi-overlapping sustainability standards at various levels of maturity. Global organizations most frequently use a mix of the GRI, SASB, and TCFD reporting frameworks to guide their sustainability reporting, while vertical industries such as telecommunications use industry-specific standards from ISO and other institutions. An independent analysis of the largest U.S. companies (Fortune 50) and top global universities (U.S. News Best 50 Global Universities) found that 54% incorporated GRI into their sustainability reports and 52% incorporated SASB. For a broader global perspective, a 2020 KPMG survey found that 73% of Fortune Global 250 companies leveraged GRI. Recently, policymakers have endorsed the climate-specific TCFD, with G7 countries New Zealand, Switzerland, and Hong Kong requiring TCFD-aligned reporting for their largest companies while many others recommending similar reporting.

The trend of combining sustainability reporting and financial reporting has resulted in organizations like the International Financial Reporting Standards (IFRS) Foundation and Financial Stability Board (FSB) overseeing accounting as well as sustainability standards. Many companies including HSBC and Nordea have integrated sustainability reporting directly into their annual reports. The definition of a standard is similar across the leading organizations mentioned above. They include a set of disclosure topics for reporting, specific metrics, units of measurement, scope of disclosure, and detailed reporting requirements. Each accounting metric is accompanied by guidance on definitions, scope, implementation, compilation, and presentation, all of which are intended to constitute suitable criteria for third-party assurance.

Today's mainstream reporting frameworks are not refined enough to allow technology teams to easily take direct action on sustainability. They do not offer a relevant, consistent set of topics or metrics applicable across IT functions in multiple industries, locations and of multiple sizes.

Furthermore, CIOs and other IT leaders are too often not involved in setting their organizations' sustainability goals and many lack such goals for their own IT departments. According to a 2023 report from Info-Tech Research, one in four IT organizations are not Supporting any ESG mandates, and across 11 industries, only 18% Have sustainable IT strategies.

Our program intends for CIOs and CTOs to have a standardized way of measuring, tracking and reporting sustainability that aligns with established and emerging ESG disclosure frameworks and directives.

Current ESG Standards Do Not Address Technology

	Global Reporting Initiative (GRI)	Sustainability Accounting Standards Board (SASB)	United Nations Global Compact (UNGC)	Task Force on Climate- Related Financial Disclosures (TCFD)	Corporate Sustainability Reporting Directive (CSRD)	U.S. SEC Proposed Rules
Description	An international independent organization established in 1997 whose standards are the most widely used reporting framework, with 82% of the world's largest 250 corporations reporting in accordance with GRI.	Industry specific framework developed by nonprofit in 2011 to help publicly traded companies determine the financial materiality of sustainability- related information. In 2022 consolidated under The International Financial Reporting Standards Foundation or IFRS.	The Compact, founded in 2000, 10 published sustainability principles across environment, human rights, labor and anti- corruption to support and advance the UN's Sustainable Development Goals, adopted by all UN member states.	Recommendations created in 2015 by the Financial Stability Board to establish consistency and forward-looking reporting in climate- related financial disclosures. created in 2015 by the Financial Stability Board to establish consistency and forward-looking reporting in climate- related financial disclosures.	EU legislation that extends the scope and reporting requirements of the Non-Financial Reporting Directive established in 2018. Beginning in 2025, CSRD requires companies and business units meeting size thresholds to publicly disclose detailed and attested ESG information.	Proposed in March 2022, the rules are modeled in part on TCFD and require reporting climate- related risks and their impact on the company; climate-related governance and risk.
Voluntary or Mandatory	Voluntary	Voluntary	Voluntary	Voluntary for now. UK and New Zealand made mandatory; other countries to follow.	Mandatory for EU-based companies and those with EU business units of specific size.	Mandatory for U.Sbased public companies.
ESG Categories	ESG	ESG	ESG	Environment	ESG	Environment
Focus (Vertical or Horizontal)	Both	Vertical	Horizontal	Horizontal	Both	Horizontal
Materiality: Financial Internal Impact External Impact, or Both (Double Materiality)	Double materiality	Financial materiality	External impact	Financial materiality	Double materiality	Financial materiality
IT-Related Standards	Electronic waste for consumer electronics companies	Standards for vertical industries in the business of hardware, software services, telecom, internet media verticals.	None	None	Not yet available, but standards expected to align with established standards.	None

What Standards Are in Scope?

The initial SustainableIT standards release in February 2023 were The SustainableIT Environmental Standards 1.0. They were the first-ever set of IT-specific metrics that address the environmental optimization of planning, building, running and managing technology operations. The standards span three tiers of sustainability impact: (1) "in IT" impact that makes the function more environmentally sustainable, (2) "by IT," for the enterprise at large, and (3) "with IT" in cooperation among industry technology peers, where sustainability standards and practices can reshape entire industries and economic sectors.

The environmental standards are divided into four topic families: Energy, Emissions, Waste, and Sourcing. We have identified technology-specific metrics that are within the sphere of CIO influence. We mapped these where applicable to GRI and SASB sustainability reporting codes, which organizations worldwide use most prevalently to guide their sustainability reporting. As such, our definition of "standards" closely align with these established industry frameworks to make them easier to understand and incorporate.

Social and Governance standards for IT were first released in May 2023 (V1.0). Unlike the environmental standards, the social and governance standards were not categorized by scope (function, enterprise, or industry). Their scope was assumed to be uniform and apply to the entire enterprise at large. However, all SustainableIT social and governance standards were categorized in one of three "tiers." Tier 1 standards are fundamental and first priority. Tier 2 and Tier 3 followed suit as secondary and tertiary in order of priority. The goal in categorizing social and governance standards by tier was to avoid overwhelming IT leaders with many standards. By focusing on Tier 1, IT leaders can be assured they would still make an impact even if they were unable to address most of the standards at once due to time and resource limitations. Social standards are divided into three topic families: Social and Economic Inclusion, Sourcing Social Accountability, and Health and Safety. Governance standards are divided into Culture, Data Governance, Risk Management, and Technology and Innovation.

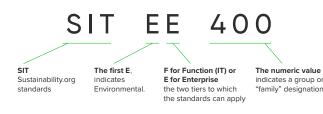
Most of the SustainableIT standards are decision-support metrics tailored to technology's impact on the environment or society. These metrics are not necessarily for public disclosure themselves, though most are relevant to reportable goals. Rather, they aid in prioritizing, goal-setting and tracking improvement. Like other sustainability standards taxonomies, they serve as a consistent reference list against which companies can respond. And finally, they help in educating others on the role technology plays in ESG sustainability across the enterprise and beyond.

Are the Standards Compatible with Existing Regulations and Frameworks?

SustainableIT standards are compatible with GRI, SASB, and TCFD, making it easier to associate IT-driven outcomes with the high-level sustainability metrics cited in corporate annual reports.

Each of the SustainableIT Standards has a unique code to better identify it for use and reporting. Most sustainability standards models use relationship coding. Ours is modeled after the method used by the Global Reporting Initiative (GRI), the oldest and one of the most widely adopted sustainability standards frameworks. Each environmental SustainableIT (SIT) code begins with a two-letter combination. The first, E, indicates Environmental. The second letter is F for Function or E for Enterprise, which are the two tiers to which the standards can apply. S and G letters denote social or governance standards. The numeric value in the code is simply a group relationship designation. For example, 100 is associated with the Energy group. One level down in this group is IT infrastructure energy consumption (110), and one component of infrastructure is data centers (111). Similarly, the Emissions group of standards is identified as 200, Waste is 300 and Sourcing is 400.

Standards Relationships and Code Explanation





Who Came Up With These Standards?

The Sustainability Standards Taxonomy Strategy Committee ("Standards Committee") directed, developed and refined the standards released in Version 1. The Group's seven founding members are:

- » Ivneet Kaur, EVP & Chief Technology Officer, Sterling
- » Brian Kirkland, CIO, Choice Hotels International
- » Srini Koushik, CIO, Rackspace
- » Vipul Nagrath, Senior Vice President, ADP
- » Niklas Sundberg, SVP/CIO Global Solutions Division, Assa Abloy
- » Katherine Wetmur, Managing Director, Morgan Stanley and elected Chair of the Standards Committee
- » Jedidiah Yueh, Founder and CEO, Delphix

The Standards Committee appointed individuals from their teams to form the Sustainability Standards Working Group which used an agile methodology to develop the initial set of environmental IT standards. The following six individuals make up the current working group:

- » Shane Artis, Executive Director and Distinguished Engineer, Morgan Stanley
- » Ben Banquera, VP Evangelist and Sr. Architect, Rackspace
- » Peter Brostowicz, VP IT Applications and Data, Lumentum
- » Danielle Conkling, Director of Corporate Social Responsibility & ESG, Silicon Valley Bank
- » Andrew Li, Senior Manager, Sales Strategy and Readiness, Delphix
- » Gordon Tharp, Information Technology Regional Manager, North America, Assa Abloy

The team completed a "reality check" exercise to further refine subsets of metrics to ensure that their level of granularity is useful and/or necessary for decision-making. Team members also validated the units of measure and whether they are reasonable and practical to obtain and track to drive transparent outcomes.

In addition, we have identified and met with critical influencers in the sustainability ecosystem. IT leaders from large-profile organizations that have already established ambitious target settings have promised feedback from "field testing" of the standards in their own organizations.

How Are We Driving Implementation of These Standards?

We will drive implementation by encouraging IT practitioners to use them within the purview of IT function and enterprise sustainability by:

- » Having the standards freely shared publicly.
- » Working with CIOs internationally to spread the word peer-to-peer that these standards exist and provide a consistent framework for targeting and measuring sustainability improvement.
- » Gaining visibility via IT and sustainability media and events that this resource exists and fills a critical gap in sustainable business metrics and KPIs.
- » Engaging in licensing agreements with consulting organizations that wish to use the standards commercially with their clients.

What Are SustainableIT.org's Next Steps?

The standards are a foundational tool for SustainableIT.org's integrated content portfolio of programs and resources. These include best practices documented from case studies, journey map guidance, and a capability maturity model. We will also develop a curriculum for team and stakeholder education that includes webinars, custom workshops and peer sounding boards.

The Board of Directors' Standards Committee will continue to refine the standards based on input from user communities and development of regulations and reporting requirements.

SustainableIT Standards Tables

Environmental Standards V1.0. Last Updated June 15, 2023

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Energy Function SIT EF 100	EF 110 Technology infrastructure total energy consumption: electricity, heating, cooling. Include separately calculated	EF 110-1 Owned/on-premises: CPUs, monitors, desktops, laptops/notebooks, tablets, routers, printers, smartphones, desktop phones, servers, applications	GRI 302-1, 3 TC-IM-130a.1 TC-SI-130a.1
	consumption from data centers, end-user devices	EF 110-1.a kWh rack power consumption by location, time of day, per end user	
	and application portfolio.	EF 110-1.b Percentage renewable (on-premises, co-location and cloud-hosted) Solar, wind, geothermal, hydropower, tidal, biomass	
		EF 110-2 Third party-sourced, public cloud- hosted, co-located: Hardware, software	
		EF 110-2.a kWh by provider, location, time of day, per end user	
		EF 110-2.b Percentage renewable (on-premises, co-location and cloud-hosted) Solar, wind, geothermal, hydropower, tidal, biomass	
	EF 111 Data center total energy	EF 111-1 On premises-hosted:	
	consumption: electricity, heating, cooling	EF 111-1.a kWh rack power consumption by location, time of day, per end user	
		EF 111-1.b Percentage renewable (on-premises): Solar, wind, geothermal, hydropower, tidal, biomass	
		EF 111-1.c ekWh per capita (end user) "energy performance by source"	
		EF 111-1.d Power usage efficiency (PUE) (I.e., total facility energy / IT equipment energy)	
		EF 111-1.e Percentage of data centers complying with EU Data Centre Code of Conduct	
		EF 111-2 Third party-hosted, co-located:	
		EF 111-2.a kWh by provider, location, time of day, per end user	
		EF 111-2.b Percentage renewable (on-premises): Solar, wind, geothermal, hydropower, tidal, biomass	
		EF 111-2.c ekWh per capita (end user) "energy performance by source"	
		EF 111-2.d EF 111-1.d Power usage efficiency (PUE) (I.e., total facility energy / IT equipment energy)	
		EF 111-2.e Percentage of data centers complying with EU Data Centre Code of Conduct SIT EF 111-1.e	
		EF 111-3 Percentage of data center workloads that are portable (can be easily run in different locations depending on power management factors)	

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Energy Function SIT EF 100	EF 112 End-user devices energy consumption (laptops/notebooks, tablets, smartphones, desk phones): electricity, heating, cooling	EF 112-1 kWh by location (on-premises, remote), time of day, per device, per end user EF 112-2 Percentage renewable: Solar, wind, geothermal, hydropower, tidal, biomass	GRI 302-1, 3 TC-IM-130a.1 TC-SI-130a.1
	EF 113 Application portfolio total energy consumption (avg. workloads)	EF 113-1 On premises-hosted: EF 113-1.a kWh power consumption by location, room, time of day, per end user EF 113-1.b kWh consumption for software updates EF 113-1.c Percentage of portfolio running on renewable energy - Solar, wind, geothermal,	TC-IM-130a.1 GRI 302-1, 3
		hydropower, tidal, biomass EF 113-1.d Percentage development following green design and code practices EF 113-2 Third-party-hosted, co-located:	
		EF 113-2.a kWh by provider, location, room, time of day, per end user EF 113-2.b kWh consumption for software updates	
		EF 113-2.c Percentage of portfolio running on renewable energy - Solar, wind, geothermal, hydropower, tidal, biomass EF 113-2.d Percentage of application portfolio delivered by third- parties	
		EF 113-3 Percentage using containers, microservices, serverless EF 113-4 Number of applications per end user	
		EF 113-5 Percentage of portfolio green coded	
	EF 120 Percentage workloads cloud -hosted (e.g., applications, storage, data processing capacity, cybersecurity	EF 120-1 Percentage cloud-hosted by provider EF 120-2 Percentage on renewable energy (Solar, wind, geothermal, hydropower, tidal, biomass)	TC-SI-000.A

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Energy Function SIT EF 100	EF 130 Lifecycle energy consumption of IT products and services (e.g., application operations, messaging and collaboration, service desk, security, networks, and connectivity): electricity, heating, cooling SIT EF 140 Energy sourcing	EF 130-1 Percentage of IT products and services having an extraordinarily high workload EF 130-2 Percentage of IT products and services running on renewable energy - Solar, wind, geothermal, hydropower, tidal, biomass EF 130-3 Percentage of eligible products and services hosted/delivered by third parties EF 140-1 Percentage of energy sources controlled/influenced	GRI 302-1, 3
Emissions Function SIT EF 200	EF 210 Technology infrastructure total emissions (Roll up metrics from the below categories of data center, end-user devices and applications)	 Controlled/Influenced EF 210-1 Owned/on-premises (include servers and cooling) EF 210-1.a Metric tons CO₂ by location, time of day, per end user EF 210-1.b GHG intensity - ratio that expresses the impact of GHG emissions per unit of economic value (e.g., metric tons of CO₂ per unit of total revenues or per unit of production) EF 210-2 Third party-hosted and co-location data centers EF 210-2.a Metric tons CO₂ by provider, per end user EF 210-2.b GHG intensity 	GRI 305-1, 2, 3 TC-IM-130a.1 TC-SI-130a.1
	EF 211 Data center emissions	EF 211-1 Owned/on premises-hosted metric tons CO ₂ by location, time of day, per end user (Include servers and cooling) EF 211-2 Third party-hosted and co-location data centers metric tons CO ₂ , by provider, per end user	_
	EF 212 End-user device emissions (laptops/notebooks, tablets, smartphones, desk phones)	 EF 212-1 Metric tons CO₂, by location, over time period, per end user EF 212-2 Average lifecycle of end-user devices by type, location, user category EF 212-2.1 Average emissions reduction achieved by lifecycle extension by type EF 212-3 Percentage of end-user devices that are BYOD 	
	EF 213 Application portfolio emissions (avg. workloads)	EF 213-1 On premises-hosted metric tons CO ₂ , by portfolio, by location EF 213-2 Third party-hosted metric tons CO ₂ , by portfolio, by provider	

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes	
Emissions Function SIT EF 200	EF 220 Lifecycle emissions IT products and services (e.g., application operations, messaging and collaboration, service desk, security, networks and connectivity) Include electricity, heating, cooling	EF 220-1 Metric tons of CO ₂ by product or service	TC-IM-130a.1 TC-SI-130a.1 GRI 305-1, 2, 3	
Waste Function SIT EF 300	EF 310 Device and hardware lifecycle circularity (e.g., servers, laptops, smartphones, desktop phones, monitors, printers, network equipment)	EF 310-1 Percentage IT devices reused/ refurbished or repurposed by type EF 310-2 Percentage IT devices recycled/ remanufactured EF 310-3 Percentage equipment not disposed sustainably (i.e., landfilled) EF 310-4 Percentage of device/hardware units donated responsibly (with assurances of downstream sustainable disposal) by type, over time period. EF 310-5 Refresh cycle of IT devices by type	TC-HW-410a.4 GRI 306-3, 4, 5	
Sourcing Function SIT EF 400	Note: Sourcing E-sustainability criteria categories: Energy, transportation, waste, packaging. Criteria for sustainability within above categories: Carbon product footprint, ecolabel/energy certifications, renewable energy use, (solar, wind, geothermal, hydropower, tidal, biomass), GHG emissions, low-carbon fuels/electric vehicles in fleet, product lifespan, commitment to recycled material in product/packaging, waste reduction, and compliance with government rules and directives.			
	EF 410 Software sourced sustainably (i.e., vendors, manufacturers, and supply chain); See E-sustainability sourcing criteria above	EF 410-1 Percentage of and degree to which vendors meet requirements; also Percentage of requirements met by each primary vendor. EF 410-2 Percentage of software licenses or instances sourced sustainably	GRI 308-1, 2	
	EF 420 Hardware and devices sourced sustainably (i.e., vendors, manufacturers and supply chain)	EF 420-1 Percentage of installed base sourced sustainably EF 420-2 Percentage of new purchases sourced sustainably over time period EF 420-3 Percentage of total spend to sustainable sources		

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Sourcing Function SIT EF 400	EF 430 Certified devices/ hardware	EF 430-1 Percentage of eligible technology devices/hardware meeting ENERGY STAR®, EPEAT, and/or TCO Certified criteria	GRI 308-1, 2 TC-HW-410a.3
	EF 440 IT procurement process sustainability	EF 440-1 Percentage of IT purchases utilizing channels/processes optimized for sustainability, over time period	GRI 204
		EF 440-2 Percentage of IT procurement spend utilizing channels/processes optimized for sustainability, over time period	
	EF 450 Outsourcer sustainability	EF 450-1 Percentage of and degree to which vendors meet requirements; also percentage of requirements met by each primary vendor	GRI 308-1, 2
		EF 450-2 Percentage of outsourcing (e.g., transaction volumes, spend) sourced sustainably by type, total spend	
	EF 460 Infrastructure services sourced sustainably (e.g., cloud, data centers, e-commerce providers)	EF 460-1 Percentage of vendors meeting requirements; also percentage of requirements met by each primary vendor	GRI 308-1, 2 CG-EC-130a.1,2,3 (E-comm)
		EF 460-2 Percentage of third party-hosted workloads sourced sustainably by type, total spend	
	EF 470 Business services sourced sustainably (e.g., consulting firms,	EF 470-1 Percentage of vendors meeting requirements; also percentage of requirements met by each primary vendor	GRI 308-1, 2
	integrators, contractors)	EF 470-2 Percentage of services sourced sustainably by type, total spend	
	EF 480 Mobile services sourced sustainably	EF 480-1 Percentage of vendors meeting requirements; also percentage of requirements met by each primary vendor	
		EF 480-2 Percentage of mobile services sourced sustainably by type, total spend	

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Energy Enterprise SIT EE 100	EE 110 Enterprise facility energy consumption (green buildings)	EE 110-1 kWh by location, time of day, facility, sq. meters EE 110-2 Percentage renewable: Solar, wind, geothermal, hydropower, tidal, biomass EE 110-3 Percentage Square meters certified	GRI 302-1, 2, 3
	EE 120 Hybrid workforce enablement	EE 120-1 kWh by location, by ratio of remote to office workers EE 120-2 Percentage renewable: Solar, wind, geothermal, hydropower, tidal, biomass	
	EE 130 Enterprise manufacturing energy consumption	EE 130-1 kWh by location, time of day, facility, sq. meter EE 130-2 Percentage renewable: Solar, wind, geothermal, hydropower, tidal, biomass EE 130-3 Percentage square feet that are certified green (e.g., in LEED-certified)	
	EE 140 Energy sourcing	EE 140-1 Percentage of energy sources controlled/influenced	
Emissions Enterprise SIT EE 200	EE 210 Virtual meetings enablement	EE 210-1 Metric tons CO ₂ for meetings travel by number kilometers, by number trips, per employee EE 210-2 Metric tons CO ₂ saved/avoided per FTE, over time period enabled by virtual meeting tools and capabilities	
	EE 220 Enterprise facilities emissions	EE 220-1 Metric tons CO ₂ , by location, over time period EE 220-2 GHG intensity - ratio that expresses the impact of GHG emissions per unit of economic value (e.g., metric tons of CO ₂ per unit of total revenues or per unit of production)	GRI 305- 1, 2, 3
	EE 230 Eco-friendly business travel	EE 230-1 Percentage efficient travel (kilometers, trips per FTE)	GRI 305-3

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Emissions Enterprise SIT EE 200	EE 240 Enterprise transportation Scope 1 emissions (I.e., enterprise direct use of road, rail, air, marine; Scope 2, 3 are included in procurement & supply-chain emissions)	EE 240-1 Metric tons CO ₂ , by location, mode, over time period EE 240-2 Percentage of fleet that is electric and hybrid	GRI 305-1; SASB TR-RO-110a, TR-MT-110a, TR-RA-110a, TR-AF-110a
	EE 250 Procurement Scope 2 and 3 emissions (e.g., purchasing, shipping, transport)	EE 250-1 Metric tons CO ₂ per unit procured, by item type, provider, location, over time period	GRI 305-2, 3
	EE 260 Enterprise supply-chain emissions	EE 260-1 Metric tons CO ₂ by supply channel, item categories, stage. (e.g. transport, storage)	GRI 305-2, 3
	EE 270 Enterprise manufacturing emissions	EE 270-1 Percentage of manufacturing process automated (streamlined production cycle utilizing AI, IoT, RPA, etc.)	GRI 305-1,2,3
		EE 270-2 Metric tons CO ₂ , by location, over time period	
Waste Enterprise SIT EE 300	EE 310 Water consumption	EE 310-1 Water consumption enterprise facilities - Exclude manufacturing processes EE 310-1.a Megaliters withdrawn by location, water source, over time period EE 310-1.b Percentage water withdrawn from high-stress regions EE 310-1.c Baseline megaliters per facility m ² (e.g., a data center) over time period EE 310-1.d Megaliters discharged by location, water destination, level of treatment, over time period EE 310-1.e Water intensity: Megaliters per facility m ² (e.g., a data center) over time period	TC-IM-130a.2 TC-SI-130a.2 GRI 303-1,2,3,4,5
	EE 320 Paperless enterprise enablement	EE 320-1 Percentage of enterprise processes that are electronic (paperless), e.g., transactional, operational, archiving and other document management processes)	

Category	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Waste Enterprise SIT EE 300	EE 330 Manufacturing waste reduction (include enterprise- owned and contracted)	EE 330-1 Percentage of materials sourced sustainably (see criteria under Sourcing metrics) EE 330-2 Mts materials not recycled (landfilled) EE 330-3 Megaliters withdrawn by location over time period EE 330-4 Percentage withdrawn from high-stress regions EE 330-5 Megaliters discharged, by location, over time, by level of treatment EE 330-6 Percentage electronic waste disposal complying with EU WEEE Directive	GRI 301-2,3 GRI 303-3, 4 SASB TC-IM-130a.2 TC-SI-130a
Sourcing Enterprise SIT EE 400	EE 410 Supply-chain sustainability	EE 410-1 Percentage of vendors meeting requirements; also percentage of requirements met by each primary vendor EE 410-2 Percentage of materials moved sustainably by volume/weight, total spend, over time period	gri 308-1, 2 gri 102-9
	EE 420 Procurement process sustainability	EE 420-1 Percentage of purchases utilizing sustainable procurement channels/process	GRI 204
	EE 430 Sustainable sourcing for manufacturing	EE 430-1 Percentage of manufacturing supplies/ raw materials sourced from sustainability-certified suppliers	GRI 301-1, 2, 3

	environmental standards explanations and References V1.0. East opdated June 13, 2023			
Energy Standards (SIT Codes)	Explanation	References		
kWh consumption EF 110-1.a, EF 110-2.a, EF 111-1.a, EF 111-1.c, EF 111-2.a, EF 111-2.c, EF 112-1, EF 113-1.a, EF 113-1.b, EF 113-2.a, EF 113-2.b, EE 110-1, EE 120-1, EE 130-1	 IT's energy consumption is measured and tracked to inform choices to reduce total kilowatt hours (kWh) consumed and thereby reduce greenhouse gas (GHG) emissions from owned assets. Hosted or co-location assets should be measured and tracked as well for the same reasons, with vendors as partners with shared goals. Much like one kilowatt is equal to 1000-watts of power, one kilowatt-hour is equivalent to 1000 watts, or joules, of energy use over one hour. To find out how much energy a server uses each year, multiply the power consumption in watts by the number of hours used, then by the number of days used, Divide the result by 1000; i.e., kWh = (watts × hrs) ÷ 1000. For example, to find the kWh of 1200 watts for 12 hours: kWh = (1200 × 8 × 365) ÷ 1000 kWh = 3,504,000 ÷ 1000 kWh = 3504 – approximately the energy consumed by two typical enterprise converted. 	JustEnergy.com		
Technology infrastructure energy consumption EF 110	Servers per year. Measurement must include power used to heat or cool facilities dedicated to the infrastructure (e.g., data center rooms). Consumption volumes should be normalized by end user served. Since energy usage and intensity vary by location and time of day, measuring these factors can inform decisions such as where and when to run compute-intensive processes. Data centers, end-user devices and application portfolio are broken out for separate measurement because of the significance of their environmental impact. Their individual energy metrics should also be rolled up into EF 110 for an overall infrastructure consumption total.			
Percentage renewable EF 110-1.b, EF 110-2.b, EF 112-2, EF 120-2, EF 130-2, EF 111-1.b, EF 111-2.b, EF 113-1.c, EF 113-2.c,EE 110-2, EE 120-2, EE 130-2	Renewable energy refers to energy from sources that are naturally and constantly replenished. Because nuclear power uses up radioactive fuel, it is not considered among renewable energy sources and is not counted as such in sustainability metrics. To find out the source/type of energy for a given facility or location, consult databases such as the eGRID in the U.S.	United Nations Climate Action eGRID		
ekWh per capita (end user) EF 111-1.c, EF 111-2.c	Equivalent kilowatt hours (ekWh) is a standard unit of energy consumption used to compare energy sources.	Managing Energy		
Power usage effectiveness (PUE) EF 111-1.d, EF 111-2.d	This KPI is a metric used to determine the energy efficiency of a data center. PUE is determined by dividing the total amount of power entering a data center by the power used to run the IT equipment within it. PUE is expressed as a ratio, with overall efficiency improving as the quotient decreases toward 1.0.	TechTarget		
Percentage of data centers complying with EU Data Center Code of Conduct EF 111-1.e, EF 111-2.e	This Code is an initiative overseen by the Joint Research Center of the European Commission that aims to inform and stimulate data center operators and owners to reduce energy consumption in a cost-effective manner without hampering the mission critical function of data centers.	European Commission		
Percentage data center workloads that are portable EF 111-3	This is an important KPI for the ability to move IT computing workloads to more energy-efficient platforms. Workload portability is the ability to move an application from one environment to another, i.e., multi-cloud environments. Typically, containers run a virtualized workload, processed by an application broken up into microservices.			

Environmental Standards Explanations and References V1.0. Last Updated June 15, 2023

Emissions Standards (SIT Codes)	Explanation	References	
Percentage development following green design and code practices EF 113-1.d, EF 113-5	Software's computational efficiency has a significant impact on energy consumption. A set of principles are available from The Green Software Foundation.	Green Software Foundation	
Percentage m2 certified green (e.g., LEED- certified) EE 110-3, EF 130-3	Green building rating and certification systems ensure buildings are environmentally responsible and resource-efficient throughout their lifecycle.	Whole Building Design Guide	
Emissions IT EF 210-1.a, EF 210-2a, EF 212-1,EF 213- 1, EF 213-2, EE 210-1, EE 210- 2, EE 220-1, EE 240-1, EE 270-2, EE 250-1, EE 260-1, EE 330-2	 Emissions are generally reported in the European nomenclature of metric tons. This should not be confused with the US measurement of "tons," which is 2000 pounds. A metric ton is 1000 kg. The easiest way to calculate emissions is to use a tool that converts energy usage data into emissions. Accuracy requires knowledge of the type of fuel being used to generate power. In the U.S., the EPA offers a Power Profiler tool that uses mail codes to determine power source and apply this to its calculations. To calculate the amount of emissions generated by IT devices, multiply the annual kWh of the device by the global average carbon intensity (currently 0.000475 Mt CO₂ per kWh. A typical pair of IT servers consuming 3504 kWh per year produces an average of 1.66 Mt CO₂ annually. Carbon intensity varies greatly by type of power plant supplying the electricity for the data center. 	US Environmental Protection Agency EPA Power Profiler	
GHG intensity EF 210-1.b	GHG intensity is a way to normalize total emissions attributed to a business by the amount of output or value created by the business. The ratio of emissions units divided by value created is most typically used in the manufacturing industry but can even be applied to whole countries using gross domestic product as the denominator. Similar comparisons could be made between owned and hosted IT data centers using a denominator of utilized server capacity, data volume handled or end users served.	OECD.org	
Lifecycle of end-user devices EF 212-2, EF 430	The device lifecycle involves all the stages that the device undergoes during its use in the organization. While extending lifecycle of devices will reduce emissions to create new devices, benefits must be balanced against any designed increase in efficiency of new devices. A metric called Base TEC (typical energy consumption) Allowance can be used to calculate the annual demand for devices.	ENERGY STAR®	
Application portfolio emissions EF 213, EF 213-1, EF 213-2	One method for expressing portfolio emissions is software carbon intensity (SCI). The factors used to determine SCI of a given application or suite of applications is E (the energy consumed by the software in kWh) X I (emissions associated with that amount of energy consumption) + M (carbon emissions of the hardware that the software runs on) per R (a functional unit such as end user or device).	Green Software Foundation SCI	
Smart/green buildings EE 220-3	Buildings and construction account for 37% of energy related CO ₂ emissions. Construction and operations standards are being adopted and marketed to businesses looking for new or renovated space.	World Green Building Council	
Eco-friendly business travel EF 111-1.e, EF 111-2.e	Unlike for tourist travel, there are few global standards for sustainable business travel. Businesses must set their own policies based on industry insights (e.g., traveling economy-class has half the CO ₂ footprint of business class, because passengers take up half the space) and make a conscious effort to travel in an environmentally friendly way that reduces impact on the environment.	Salesforce.com	

Waste Standards (SIT Codes)	Explanation	References
Device lifecycle circularity EF 310	E-waste is a sustainable impact over which IT leaders should take direct control, working with partners in the ITAD (IT asset disposition) sector.	Green-alliance.org.uk Circulartech.apc.org
Percentage water withdrawn from high-stress regions EE 310-1.b	When a territory withdraws 25% or more of its renewable freshwater resources, it is said to be 'water-stressed'. Five out of 11 regions have water stress values above 25%, including two regions with high water stress and one with extreme water stress.	Council on Foreign Relations
Percentage of materials sourced sustainably EE 330-1	Sustainable sourcing is the integration of social, ethical, and environmental performance factors into the process of selecting suppliers. Sustainability criteria that should be applied to materials providers and sources include Carbon product footprint, ecolabel/energy certifications, renewable energy use, (solar, wind, geothermal, hydropower, tidal, biomass), GHG emissions, low-carbon fuels/electric vehicles in fleet, product lifespan, commitment to recycled material in product/ packaging, and waste reduction, and compliance with government rules and directives.	Sourcing Industry Group
Percentage electronic waste disposal complying with EU WEEE directive EE 330-6	Improving the collection, treatment and recycling of electrical and electronic equipment (EEE) at the end of their life can improve sustainable production and consumption, increase resource efficiency, and contribute to the circular economy.	European Commission E-Waste Rules
Software sourced sustainably EF 410, EF 410-2, EF 420, EF 420-1, EF 420-2, EF 430-1, EF 430-2, EF 440, EF 450, EF 450-2, EF 460, 460-2, EF 470, EF 470- 2, EF 480, EF 480-2, EE 410, EE 410-2, EE 420, EF 430	Sustainable sourcing is the integration of social, ethical and environmental performance factors into the process of selecting suppliers. IT leaders should consult with procurement peers who likely already have sustainable sourcing strategies and experience. Sourcing E-sustainability criteria categories: Energy, transportation, waste, packaging. Criteria for sustainability within above categories: Carbon product footprint, ecolabel/energy certifications, renewable energy use, (solar, wind, geothermal, hydropower, tidal, biomass), GHG emissions, low-carbon fuels/electric vehicles in fleet, product lifespan, commitment to recycled material in product/packaging, and waste reduction, and compliance with government rules and directives.	Sourcing Industry Group
Eligible technology devices/ hardware meeting certification standards (ENERGY STAR®, EPEAT, and/or TCO) EF 430	IT devices may be certified by various regional or global programs, which can be used as criteria for device selection.	TCO The Global Electronics Council EPEAT ENERGY STAR®

Category	Tier Priority level: Tier 1 highest/ first, Tier 2 second priority, Tier 3 is third/ last priority	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Social and Economic Inclusion SIT S 100	Tier 1	S 110 Technology accessibility (i.e., accommodations to facilitate access/ usage for all)	S 110-1 Approach to ensure constituent accessibility to IT products and services (e.g., websites, virtual collaboration platforms, chats, e-docs, applications in general) S 110-2 Accessibility criteria and extent of application to systems design and engineering S 110-3 Extent of adoption of assistive technology (e.g., text-to-speech tools) S 110-4 Extent of adoption of Web Content Accessibility Guidelines S 110-5 Extent of intentional adoption of simpler technologies accessible to non- technologists (e.g., low-code/no-code)	Voluntary Product Accessibility Template (VPAT - WCAG, U.S. Section 508, EN 301 549) https://www.w3.org/WAl/ standards-guidelines/wcag/
	Tier 1	S 120 Employee diversity, equity, and inclusion	S 120-1 Approach to increase diversity in IT staff and leadership team S 120-2 Approach to increase diversity in IT talent pipeline S 120-3 Representation of diverse groups in IT (e.g., gender, race, age, region) S 120-4 Percentage difference between group representation on IT staff vs. in regional workforce	GRI 401-1, 405-1, 2 SASB TC-HW-330a.1, TC-SI-330a.3
	Tier 2	S 130 Technology partner diversity	S 130-1 Approach to diversify technology partner ecosystem (e.g., minority-owned, locally owned businesses) S 130-2 Percentage diverse vendors of total and of total spend (e.g., minority-owned, female-owned, locally owned, and/or located in disadvantaged regions	

SustainableIT Social Standards V1.0. Last Updated May 12, 2023

Category	Tier	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Social and Economic Inclusion SIT S 100	Tier 2	S 140 Technology inclusiveness (e.g., consideration of diverse groups in development lifecycle)	S 140-1 Inclusiveness approach, categories, and criteria applied to IT systems design and engineering S 140-2 Extent to which inclusiveness considerations factored into systems origination and early design (i.e., user stories, requirements gathering process, validation, user experience, and functional design)	
	Tier 3	S 150 Digital community engagement (i.e., tech-centric interaction with local businesses, institutions charities, and causes)	S 150-1 Type and extent of tech-oriented engagement with communities (e.g., tech donations, digital literacy or IT skills training, "coding for good") S 150-2 IT budget for community engagement allocated/spent over time period S 150-3 Outcomes of principal engagement efforts—quantifiable and unquantifiable S 150-4 Approach to overcome digital divide preventing underserved communities from accessing critical technology (i.e., technology products and services related to education, jobs, and healthcare)	GRI 413-1
Sourcing Social Accountability SIT S 200	Tier 2	S 210 Technology vendor social accountability	S 210-1 Approach to assess, monitor, and hold accountable technology vendors for social requirements compliance S 210-2 Social sustainability criteria or requirements for IT vendors* S 210-3 IT vendors having significant risk of child or forced labor and human rights violations, and how risk addressed S210-4 Approach to assess and address IT vendor corruption risk and incidents S210-5 Exceptions made for small or otherwise disadvantaged vendors that may not be able to meet all requirements	GRI 205, 414-1

Category	Tier	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Sourcing Social Accountability SIT S 200	Tier 3	S 220 Enterprise supply-chain social accountability	S 220-1 Approach to assess, monitor, and hold accountable supply-chain partners for social requirements compliance S 220-2 Social sustainability criteria or requirements for supply-chain partners* S 220-3 Supply-chain partners having significant risk of child or forced labor and human rights violations, and how risk addressed S 220-4 Approach to assess and address supply chain partner corruption risk and incidents S 220-5 Exceptions made for small or otherwise disadvantaged supply chain partners that may not be able to meet all requirements	GRI 205, 414-1

*Footnote:

Vendor or supply-chain partner social sustainability criteria or requirements may include: Diversity, equity, and inclusion, Safe and healthy working conditions, No child labor, No modern slavery and forced labor, Fair wages and hours, Empowerment of employees to raise concerns safely, Freedom of association for employee, Future-of-work enablement (e.g., Remote work, digital literacy and future skills training, virtual workplace), Privacy protection for employees, Product safety and security, Social, economic, and environmental justice commitment, Community engagement (e.g., local-first policies).

Health and Safety SIT S 300	Tier 1	S 310 Employee health and safety	S 310-1 IT product and service categories for which a potential negative impact on health or safety exists (e.g., repetitive stress disorders, vision deterioration from monitor use, virtual reality-related or Al-based systems contributing to physical injuries, etc.) S 310-2 Percentage relevant IT products and services assessed for health and safety impacts S 310-3 Incidents of IT products and services non-compliance with health and safety policies/regulations, and how addressed	GRI 403, 416-1, 2
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Governance Standards V1.0. Last Updated May 12, 2023

Category	Tier Priority level: Tier 1 highest/ first, Tier 2 second priority, Tier 3 is third/ last priority	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Culture of Sustainability	Tier 1	G 110 Mission and values	G 110-1 IT and enterprise sustainability mission, core values, and communication	GRI 2-22
SIT G 100	Tier 1	G 120 Governance and accountability	 G 120-1 Sustainability governance approach (e.g., strategy and decision-making responsibility, accountability, stakeholder involvement) G 120-2 Accountability for sustainability reporting (i.e., completeness, accuracy, timeliness) G 120-3 Approach to ensure visibility of goals 	GRI 1, 2-26
	Tier 2	G 130 Investment	and progress G 130-1 Approach to funding sustainability initiatives G 130-2 Sustainability-specific funding as percentage of relevant budgets G 130-3 Extent to which sustainability is factored into setting, approving IT budgets G 130-4 Extent to which sustainability is factored into setting, approving project investments	
	Tier 2	G 140 Training	 G 140-1 Average training hours per employee, elected and compulsory, over time period G 140-2 Programs, incentives for sustainability mentoring/coaching G 140-3 Approach to ensure adequate pipeline of sustainability-related skills 	GRI 404-1, 2, 3
Data Governance SIT G 200	Tier 1	G 210 Data security	 G 210-1 Frequency of data security policy/ procedure review and update G 210-2 Incidents of noncompliance with data security policies/procedures, over time period G 210-3 Percentage data security incidents where root cause identified and corrective action taken, over time period G 210-4 Percentage employees receiving mandated data security training 	SASB TC-SI-230a

Category	Tier	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Data Governance SIT G 200	Tier 1	G 220 Data privacy	G 220-1 Approach to provide constituents with greater control of personal data G 220-2 Approach to ensure personal data management consistent with constituent expectations G 220-3 Substantiated complaints of data misuse or lack of compliance with constituents' instructions, over time period	GRI 418-1 SASB TC-HW-230a.1 TC-SI-220a.1
	Tier 2	G 230 Data usage	 G 230-1 Approach to data usage governance (e.g., policy awareness/enforcement, user consent mechanisms, training, oversight, and audits, etc.) G 230-2 Data usage policy violations and constituents impacted, over time period G 230-3 Approach to provide data usage transparency to constituents G 230-4 Approach to limit environmental impact of data usage (i.e., data architecture 	GRI 418 SASB TC-HW-230a.1 TC-SI-220a.1
Risk Management SIT G 300	Tier 1	G 310 Business resiliency/continuity	G 310-1 Approach to assess and minimize environmental and economic risks to enterprise systems and service continuity G 310-2 Resiliency requirements, assessments, and oversight of key vendors/ providers (e.g., power providers, cloud-hosting providers, outsourcers) G 310-3 Incidents resulting in business interruption/downtime, and average and cumulative duration, over time period G 310-4 Constituents affected by business interruptions/downtime, over time period G 310-5 Percentage essential workers	SASB TC-SI- 550.a
	Tier 2	G 320 Enterprise risk management	 (IT is expected to implement industry standard cyber risk and cybersecurity management strategies and mechanisms) G 320-1 Enterprise risk governance approach G 320-2 Enterprise risk management practices associated with sustainability (e.g., assessments, education, transparency, 	
	Tier 3	G 330 Economic risk management and fraud prevention	G 330-1 Approach to minimize risk of financial fraud, internally and for third-party providers G 330-2 Approach to increase transparency, redundancy, and frequency of financial review G 330-3 Approach to assess and address corruption risk and incidents in business	GRI 205

Category	Tier	Code/Topic	Codes/Metrics/Units of Measure and Disclosure Descriptions	Related GRI and SASB Codes
Technology and Innovation SIT G 400	Tier 2	G 410 Responsible technology innovation (i.e., innovation with focus on ethics and risks for human health and environment)	G 410-1 Criteria and mechanisms to ensure technology innovation is environmentally, socially, and economically sustainable G 410-2 Percentage technology innovation projects conducted with sustainability risk and impact assessments, over time period G 410-3 Incidents of projects failing to comply with sustainability policies or procedures	
	Tier 2	G 420 Future of work enablement (i.e., remote and fluid work, Al-assist, automation, new talent models, roles, and skills)	G 420-1 Approach to support sustainable future of work in IT and the enterprise (e.g., talent modeling, remote work security and capability, automation-impact assessments) G 420-2 Approach and expenditures for upskilling/reskilling workers for new roles when displaced by automation	GRI 404-1, 2, 3w
	Tier 3	G 430 Al governance	 G 430-1 Approach to minimize negative economic, environmental, and social impacts from AI-enabled products and services G 430-1.a Approach to limit AI algorithm training energy consumption G 430-2 Incidents of failure to comply with AI policies or procedures, over time period G 430-3 Approach to identify and reduce bias in AI analytics G 430-4 Major risk areas identified for databased bias and remediation steps taken G 430-5 Percentage AI algorithms or ML models trained using anti-bias methodologies 	

About SustainableIT.org

Vision

Advancing global sustainability through technology leadership.

Mission

Our mission is to unite the world's largest community of technology and sustainability leaders to define sustainability transformation programs, author best practices and frameworks, set standards and certifications for governance, provide education and training, and raise awareness for IT-centric ESG programs that make their organizations and the world sustainable for generations to come.

Mandates

Best Practices, Research and Standards

Identify sustainable digital transformation programs by industry. Research and define best practices, frameworks, and standards for all three pillars of sustainability (environmental, societal, and governance) for IT departments and organizations.

Global Awareness and Recognition

Promote sustainable digital transformation programs and advances in sustainability. Raise awareness through local, regional, and global awards, as well as through social media, publications, and public relations.

Community, Education and Training

Build local and regional communities for technology leaders to advance sustainability. Develop education and training programs for IT leadership and professionals for all three pillars of sustainability.

Transparency and Accountability

Set standards for metrics and reporting to enable transparency and accountability. Create certification programs for individuals and organizations with rights to use our sustainability emblem.



About SustainableIT.org

SustainableIT.org is a Delaware 501(c)(6) nonprofit, non-stock legal entity led by technology executives who will advance global sustainability through technology leadership.

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