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IFRS[®] Sustainability Disclosure Standard

[Draft] IFRS S2 Climate-related Disclosures Appendix B Industry-based disclosure requirements

Volume B58—Software & IT Services

Comments to be received by 29 July 2022

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Introduction

This volume is part of Appendix B of [draft] IFRS S2 Climate-related Disclosures and is an integral part of that [draft] Standard. It has the same authority as the other parts of that [draft] Standard.

This volume sets out the requirements for identifying, measuring and disclosing information related to an entity's significant climate-related risks and opportunities that are associated with specific business models, economic activities and other common features that characterise participation in this industry.

The industry-based disclosure requirements are derived from SASB Standards (see paragraphs B10–B12 of [Draft] IFRS S2 *Climate-related Disclosures*). Amendments to the SASB Standards, described in paragraph B11, are marked up for ease of reference. New text is underlined and deleted text is struck through. The metric codes used in SASB Standards have also been included, where applicable, for ease of reference. For additional context regarding the industry-based disclosure requirements contained in this volume, including structure and terminology, application and illustrative examples, refer to Appendix B paragraphs B3–B17.

Software & IT Services

Industry Description

The Software & Information Technology (IT) Services industry offers products and services globally to retail, business, and government customers, and includes companies involved in the development and sales of applications software, infrastructure software, and middleware. The industry is generally competitive, but with dominant players in some segments. While relatively immature, the industry is characterized by high-growth companies that place a heavy emphasis on innovation and depend on human and intellectual capital. The industry also includes IT services companies delivering specialized IT functions, such as consulting and outsourced services. New industry business models include cloud computing, software as a service, virtualization, machine-to-machine communication, big data analysis, and machine learning. Additionally, brand value is key for companies in the industry to scale and achieve network effects, whereby wide adoption of a particular software product leads to self-perpetuating growth in sales.

Sustainability Disclosure Topics & Metrics

Table 1. Sustainability Disclosure Topics & Metrics

TOPIC	ACCOUNTING METRIC	CATEGORY	CODE
Environmental Footprint of Hardware Infrastructure	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	TC-SI-130a.1
	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	TC-SI-130a.2
	Discussion of the integration of environmental considerations into strategic planning for data center needs	Discussion and Analysis	TC-SI-130a.3
Managing Systemic Risks from Technology Disruptions	Number of (1) performance issues and (2) service disruptions; (3) total customer downtime ¹⁰⁴	Quantitative	TC-SI-550a.1
	Description of business continuity risks related to disruptions of operations	Discussion and Analysis	TC-SI-550a.2

Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
(1) Number of licenses or subscriptions, (2) percentage cloud-based	Quantitative	Number, Percentage (%)	TC-SI-000.A

continued...

¹⁰⁴ Note to TC-SI-550a.1 – Disclosure shall include a description of each significant performance issue or service disruption and any corrective actions taken to prevent future disruptions.

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...continued

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
(1) Data processing capacity, (2) percentage outsourced ¹⁰⁵	Quantitative	See note	TC-SI-000.B
(1) Amount of data storage, (2) percentage outsourced ¹⁰⁶	Quantitative	Petabytes, Percentage (%)	TC-SI-000.C

¹⁰⁵ Note to TC-SI-000.B – Data processing capacity shall be reported in units of measure typically tracked by the entity or used as the basis for contracting software and IT services, such as Million Service Units (MSUs), Million Instructions per Second (MIPS), Mega Floating- Point Operations per Second (MFLOPS), compute cycles, or other. Alternatively, the entity may disclose owned and outsourced data processing needs in other units of measure, such as rack space or data center square footage. The percentage outsourced shall include On-Premise cloud services, those that are hosted on Public Cloud, and those that are residing in Colocation Data Centers.

¹⁰⁶ Note to TC-SI-000.C – The percentage outsourced shall include On-Premise cloud services, those that are hosted on Public Cloud, and those that are residing in Colocation Data Centers.

Environmental Footprint of Hardware Infrastructure

Topic Summary

With the growth of cloud-based service offerings, companies in this industry own, operate, or rent increasingly more data centers and other hardware; thus, managing the energy and water use associated with IT hardware infrastructure is important to shareholder value. Data centers need to be powered continuously, and disruptions to the energy supply can have a material impact on operations, depending on the magnitude and timing of the disruption. Companies face a tradeoff between energy and water consumption due to data center cooling needs; cooling data centers with water instead of chillers is a means of improving energy efficiency, but it can lead to dependence on significant local water resources. Decisions about data center specifications are important for managing costs, obtaining a reliable supply of energy and water, and lowering reputational risks, particularly as there is an increasing global regulatory focus on climate change and as opportunities arise from innovations in energy efficiency and renewable energy.

Metrics

TC-SI-130a.1. (1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable

- 1 The entity shall disclose (1) the total amount of energy it consumed as an aggregate figure, in gigajoules (GJ).
 - 1.1 The scope of energy consumption includes energy from all sources, including energy purchased from sources external to the entity and energy produced by the entity itself (self-generated). For example, direct fuel usage, purchased electricity, and heating, cooling, and steam energy are all included within the scope of energy consumption.
 - 1.2 The scope of energy consumption includes only energy directly consumed by the entity during the reporting period.
 - 1.3 In calculating energy consumption from fuels and biofuels, the entity shall use higher heating values (HHV), also known as gross calorific values (GCV), which are directly measured or taken from the Intergovernmental Panel on Climate Change (IPCC), the U.S. Department of Energy (DOE), or the U.S. Energy Information Administration (EIA).
- 2 The entity shall disclose (2) the percentage of energy it consumed that was supplied from grid electricity.
 - 2.1 The percentage shall be calculated as purchased grid electricity consumption divided by total energy consumption.
- 3 The entity shall disclose (3) the percentage of energy it consumed that is renewable energy.
 - 3.1 Renewable energy is defined as energy from sources that are replenished at a rate greater than or equal to their rate of depletion, such as geothermal, wind, solar, hydro, and biomass.

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- 3.2 The percentage shall be calculated as renewable energy consumption divided by total energy consumption.
- 3.3 The scope of renewable energy includes renewable fuel the entity consumed, renewable energy the entity directly produced, and renewable energy the entity purchased, if purchased through a renewable power purchase agreement (PPA) that explicitly includes renewable energy certificates (RECs) or Guarantees of Origin (GOs), a Green-e Energy Certified utility or supplier program, or other green power products that explicitly include RECs or GOs, or for which Green-e Energy Certified RECs are paired with grid electricity.
- 3.3.1 For any renewable electricity generated on-site, any RECs and GOs must be retained (i.e., not sold) and retired or cancelled on behalf of the entity in order for the entity to claim them as renewable energy.
- 3.3.2 For renewable PPAs and green power products, the agreement must explicitly include and convey that RECs and GOs be retained or replaced and retired or cancelled on behalf of the entity in order for the entity to claim them as renewable energy.
- 3.3.3 The renewable portion of the electricity grid mix that is outside of the control or influence of the entity is excluded from the scope of renewable energy.
- 3.4 For the purposes of this disclosure, the scope of renewable energy from ~~hydro~~ and biomass sources is limited to ~~the following~~:
- 3.4.1 ~~Energy from hydro sources is limited to those that are certified by the Low Impact Hydropower Institute or that are eligible for a state Renewable Portfolio Standard;~~
- 3.4.2 ~~Energy from biomass sources is limited to~~ materials certified to a third-party standard (e.g., Forest Stewardship Council, Sustainable Forest Initiative, Programme for the Endorsement of Forest Certification, or American Tree Farm System), materials considered eligible sources of supply according to the *Green-e Framework for Renewable Energy Certification, Version 1.0 (2017)* or Green-e regional standards, and/or materials that are eligible for an applicable state renewable portfolio standard.
- 4 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage (including biofuels) and conversion of kilowatt hours (kWh) to GJ (for energy data including electricity from solar or wind energy).
- 5 The entity may disclose the trailing twelve-month (TTM) weighted average power usage effectiveness (PUE) for its data centers.
- 5.1 PUE is defined as the ratio of the total amount of power used by a computer data center facility to the amount of power delivered to computing equipment.

- 5.2 If disclosing PUE, the entity shall follow the guidance and calculation methodology described in *PUE™: A Comprehensive Examination of the Metric (2014)*, published by ASHRAE and The Green Grid Association.

TC-SI-130a.2. (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress

- 1 The entity shall disclose the amount of water, in thousands of cubic meters, that was withdrawn from all sources.
 - 1.1 Water sources include surface water (including water from wetlands, rivers, lakes, and oceans), groundwater, rainwater collected directly and stored by the entity, and water and wastewater obtained from municipal water supplies, water utilities, or other entities.
- 2 The entity may disclose portions of its supply by source if, for example, significant portions of withdrawals are from non-freshwater sources.
 - 2.1 Fresh water may be defined according to the local laws and regulations where the entity operates. Where there is no legal definition, fresh water shall be considered to be water that has less than 1,000 parts per million of dissolved solids ~~per the U.S. Geological Survey~~.
 - 2.2 Water obtained from a water utility in compliance with ~~U.S. National Primary Drinking Water Regulations~~ jurisdictional drinking water regulations can be assumed to meet the definition of fresh water.
- 3 The entity shall disclose the amount of water, in thousands of cubic meters, that was consumed in its operations.
 - 3.1 Water consumption is defined as:
 - 3.1.1 Water that evaporates during withdrawal, usage, and discharge;
 - 3.1.2 Water that is directly or indirectly incorporated into the entity's product or service;
 - 3.1.3 Water that does not otherwise return to the same catchment area from which it was withdrawn, such as water returned to another catchment area or the sea.
- 4 The entity shall analyze all of its operations for water risks and identify activities that withdraw and consume water in locations with High (40–80 percent) or Extremely High (>80 percent) Baseline Water Stress as classified by the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct.
- 5 The entity shall disclose its water withdrawn in locations with High or Extremely High Baseline Water Stress as a percentage of the total water withdrawn.
- 6 The entity shall disclose its water consumed in locations with High or Extremely High Baseline Water Stress as a percentage of the total water consumed.

TC-SI-130a.3. Discussion of the integration of environmental considerations into strategic planning for data center needs

- 1 The entity shall describe its approach to the integration of environmental considerations, including energy and water use, into strategic planning for data centers.
- 2 Discussion shall include, but is not limited to, how environmental factors impact the entity's decisions regarding the siting, design, construction, refurbishment, and operations of data centers.
 - 2.1 Environmental factors and criteria may include, but are not limited to:
 - 2.1.1 Location-based environmental factors, such as regional humidity, average temperature, and water availability.
 - 2.1.2 Environmental regulations, such as energy efficiency standards and national- or state-level carbon legislation on pricing, and carbon intensity of grid electricity.
- 3 The scope of disclosure includes considerations for existing owned data centers, development of new data centers, and outsourcing of data center services, where relevant.

Managing Systemic Risks from Technology Disruptions

Topic Summary

With trends toward increased cloud computing and use of Software as a Service (SaaS), software and IT service providers need to ensure they have robust infrastructure and policies in place to minimize disruptions to their services. Disruptions such as programming errors or server downtime have the potential to generate systemic risks, as computing and data storage functions move from individual company servers in various industries to data centers of cloud-computing service providers. The risks are heightened particularly if the affected customers are in sensitive sectors, such as financial institutions or utilities, which are considered critical national infrastructure. Companies' investments in improving the reliability and quality of their IT infrastructure and services are likely to affect their ability to attract and retain customers, thereby impacting revenues and opportunities in new markets.

Metrics

TC-SI-550a.1. Number of (1) performance issues and (2) service disruptions; (3) total customer downtime

- 1 The entity shall disclose (1) the number of performance issues in software and information technology (IT) services provided to customers.
 - 1.1 Performance issues are defined as any planned or unplanned downtime causing an interruption, of more than 10 minutes but less than or equal to 30 minutes, in the provision of cloud-based services to customers.
 - 1.2 Performance issues include, but are not limited to, those caused by technical failures, programming errors, cyber attacks, weather events, or natural disasters at hosting facilities.
- 2 The entity shall disclose (2) the number of service disruptions in software and IT services provided to customers.
 - 2.1 Service disruptions are defined as any planned or unplanned downtime causing an interruption of more than 30 minutes in provision of cloud-based services to customers.
 - 2.2 Service disruptions include, but are not limited to, those caused by technical failures, programming errors, cyber attacks, weather events, or natural disasters at hosting facilities.
- 3 The entity shall disclose (3) the total customer downtime related to performance issues and service disruptions in software and IT services provided to customers.
 - 3.1 Total customer downtime is defined as the interruption duration of each service disruption multiplied by the number of software and IT services licenses affected, reported in license-days. For context, the entity shall indicate the licensing basis (e.g., number of seats, number of CPU cores, number of cloud subscriptions) and whether the licenses are consumption-based or capacity based.

Note to **TC-SI-550a.1**

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- 1 For each significant service disruption, the entity shall disclose the duration of the disruption, the extent of impact, and the root cause, as well as any corrective actions taken to prevent future disruptions. Where material, the entity shall indicate the associated cost incurred, such as remediation costs to correct technology or process issues, as well as any liability costs.
- 2 A service disruption is considered significant if the cost to correct is material or if it is disruptive to a large number of customers or fundamental business operations in a manner that affects time to market, revenue capture, or other material parameters.

TC-SI-550a.2. Description of business continuity risks related to disruptions of operations

- 1 The entity shall describe potential business continuity risks associated with technology disruptions affecting operations.
 - 1.1 Examples of disruptions include, but are not limited to, those caused by technical failures, programming errors, cyber attacks, weather events, or natural disasters at hosting facilities.
- 2 The entity shall discuss measures it implements to address business continuity risks, such as technologies or processes that reduce impacts from disruptions, enhance the resilience of systems, insure against loss, or provide redundancies to critical business operations.
- 3 The entity shall identify which critical business operations support cloud-based services, and shall further note whether those operations are owned or outsourced.
- 4 The entity may discuss estimated amount of potential loss, probability of that loss, and the associated time frame. These estimates may be based on insurance figures or other third-party or internal assessments of potential loss.