HAHTAM ACE

ASSETS SINCE 2002 Why ITAM Should be IT's Answer to Sustainability Reporting

Trent Allgood

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How Much Does Air Weigh?







CO₂ Emissions Metrics

1 kgCO₂ = 2.2 Pounds of Carbon Dioxide Equivalent
1 tCO₂ = 2,200 Pounds of Carbon Dioxide Equivalent

1 tCO₂ = 2,500 miles driven in a sedan









It takes 12 acres (12 football fields) of US forest an entire year to absorb 1 tCO₂













Regulations

TFCD Recommendations:

- 1. Corporate Sustainability Governance
- 2. Strategy
- 3. Risk Management
- 4. Standardized Metrics & Targets

2010

SEC requires Scope 1 emissions from publicly traded companies

2015

Task Force on Climate Related Financial Disclosures (TFCD) Established & Recommendations published in 2017

2017

EPA Greenhouse Gas Reporting Program (GGRP) established for any US facility producing 25,000+ tCO2

JAN 2023

The Corporate Sustainability Reporting Directive (CSRD) were entered into force in the EU.

2023 ?

SEC Regulations proposed in 2022 to take effect requiring Scope 1-2, and possibly Scope 3 emissions reporting for US companies







ITAM Takeaways

- Sustainability is a growing business priority and necessity.
- Scope 1-3 Reporting will be a requirement for many organizations.
- Current problem is accurate data (which ITAM has!)
- Companies are looking for reduction opportunities.
- Sustainability will be a factor in procurement decisions.

CEOs' Top 10 Strategic Business Priority Areas for 2022-2023

Summary Top Three Mentions, Coded Responses



Source – Gartner, '<u>CEOs Turn a Sharp Eye to Workforce Issues and Sustainability in 2022-23</u>', April 27, 2022. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.





2022 Corporate Emissions

IT Accounts for 24% of all corporate Scope 1-3 emissions. Including:

- 0% of Scope 1
- 20% of Scope 2
- 40% of Scope 3





76% of CO2e Emissions were offset by Renewable Energy Credit purchases and other sustainability offset initiatives.





IT Emissions: Workstations

Because the majority of lifetime CO2e is produced during manufacturing, the best way to reduce emissions for these device classes is to extend the useful life of the device as much as possible. For laptops, workstations, and their peripherals, manufacturing and transportation is the largest contributor of CO2e (Scope 3 emissions).

There is low variability across devices with a Std. Deviation of +/- 224 kgCO2e.







Workstation Avg. kgCO2e /Year

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IT Emissions: Servers

Given the majority of a server's CO2e emissions come from the consumption of electricity, optimizing the carbon-intensity of the workloads running on a server is the most effective means of reducing emissions.







ITAM CO2e Reductions

There's an initiative to migrate 250 workloads to Azure during 2023. The anticipated reduction in emissions is 71%, excluding REC, with an actualized reduction amount of 87% including REC:



In 2022, the SAM team helped the server infrastructure team reduce the number of SQL VMs and hosts, saving \$1.2M/annually on licensing. There is also an estimated reduction of over 13,000 kgCO2e associated with that software using the Software Carbon Intensity (SCI) calculation.



Software Carbon Intensity

Software Carbon Intensity (SCI) measures how much carbon emissions can be attributed to software. This specification is focused on helping users and developers understand how to improve software to reduce or avoid the creation of emissions.

- **C** = Total amount of carbon the software causes to be emitted.
- **R** = One unit (additional user, API-call, ML Training run, etc.).
- **O** = Operational Emissions, which is the Energy consumed by the software system times the Intensity (local gCO2e/kWh).
- M = Embodied carbon (carbon emitted during the creation/disposal of any associated hardware). This comprises the Total Embodied Emissions (TE) which is the sum of Life Cycle Assessment emissions for all hardware components times the Time-Share (TS) and Resource Share (RS).
- **TS** = Time Share, which is the length of time the hardware is reserved for use by the software (TiR) divided by the expected lifespan that the equipment will be installed (EL).
- **RS** = Resource Share, which is the number of resources reserved for use by the software (RR) divided by the total number of resources available (ToR).

C = O + M	
SCI = (O + M) per R	
O = E * I	
M = TE * TS * RS	
TS = TiR/EL	
RS = RR/ToR	





Further Reading

- ISO WG21: How IT Asset Management can contribute towards sustainability
- Schneider Electric: Implementing Sustainable ITAM Practices for Enterprise-wide Carbon Reduction
- Gartner: 2023 Predictions: Environmental Sustainability Is Now an IT Sourcing Imperative (only available to Gartner subscribers)
- Greenhouse Gas Protocol Standards & Guidance
- Green Software Foundation: Software Carbon Intensity Specification
- FinOps Foundation: Sustainability Slack Channel & SIG



