INTELLIGENCE UPDATE

Digital infrastructure sustainability - a manager's guide

Jay Dietrich Andy Lawrence 11 Apr 2022

This series of Uptime Intelligence reports guides managers and responsible operators through the complex set of issues involved in creating an environmental sustainability strategy for data centers and associated digital infrastructure. The reports outline the strategies, the terminologies and the approaches involved; explain the key areas that must be covered by an environmental sustainability strategy and how progress should be measured and reported; and provide guidance on how to navigate some of the intricacies and challenges involved.

The series includes the following reports:

Creating a sustainability strategy

All those who operate digital infrastructure must have a sustainability strategy that spans all facilities and IT operations and addresses the needs of all stakeholders.

Tackling greenhouse gases

Operators of digital infrastructure must have a greenhouse gas emissions reduction goal that takes into account Scope 1, 2 and 3 emissions — and they must report these reductions in accordance with agreed policy.

Reducing the energy footprint

The first objective of a sustainability plan is to minimize energy use through efficiency measures. Further benefits will be realized by replacing electricity from nonrenewable sources with renewably generated energy.

IT efficiency: the critical core of digital sustainability

A digital sustainability strategy should incorporate both the facilities and IT operations, even for colocation operators. This report covers strategies, software tools and metrics that can help drive up IT efficiency.

Three sustainability elements: water, the circular economy and siting

This report discusses three important elements of the sustainability strategy: water use; siting, including design and certification; and reuse, disposal and recycling. Addressing these elements can significantly reduce the environmental impact of digital infrastructure.

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Navigating regulations and standards

Critical digital infrastructure is subject to an expanding set of regulations, directives and standards, with varying levels of maturity and acceptance. Most are voluntary, but more are becoming mandatory.

Glossary of digital infrastructure sustainability

This document explains the key terms used by those defining, regulating and applying digital infrastructure sustainability strategies.

ABOUT THE AUTHORS

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Jay is the Research Director of Sustainability at Uptime Institute. Dietrich looks beyond the hype to analyze the transformations required in energy and IT systems, data centers and software management systems, and intra-organizational collaboration, both within and between companies, to deliver sustainable data center operations.

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About Uptime Institute

Uptime Institute is the Global Digital Infrastructure Authority. For over 30 years, the company has established industry-leading benchmarks for data center performance, resilience, sustainability, and efficiency. These benchmarks assure customers that their digital infrastructure will perform consistently with their business needs under any operating conditions. With more than 4,300 awards issued globally and over 1,100 active projects in 120+ countries, Uptime has helped tens of thousands of companies optimize critical IT assets while managing costs, resources, and efficiency.

The organization's Tier Standard is the IT industry's most trusted and adopted global standard for data center design, construction, and operations. Core offerings include Tier Certifications, Management & Operations reviews, AI Infrastructure Advisory, Data Center Risk Assessments, Energy & Sustainability Assessments, Cybersecurity Assessments & Ratings, and IT Advisory Services.

Uptime Education programs have been completed by more than 100,000 data center professionals, establishing Uptime as the Learning & Development partner of choice worldwide. Uptime Institute is headquartered in New York, NY, with offices in London, Sao Paulo, Dubai, Riyadh, Singapore, and Madrid, and full-time Uptime professionals based in over thirty-four countries around the world.

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