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AI for Good: The Role of Emerging Tech in Sustainability

Barbara Lange
Founder and CEO, Kibo121
19 February 2025

H:
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TECH RETREAT

The Verge / Tech / Reviews / Science / Entertainm

SCIENCE / ENVIRONMENT / CLIMATE

AI is ‘an energy hog,’ but DeepSeek could change that

DeepSeek claims to use
are still big questions a

by **Justine Calma**
Jan 31, 2025, 11:00 AM EST

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nature > outlook > article

OUTLOOK | 17 October 2024 | Correction 25 November 2024

Fixing AI’s energy crisis

Hardware that consumes less power will reduce artificial intelligence's appetite for energy. But transparency about its carbon footprint is still needed.

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Saudi’s NEOM, DataVolt to Build $5 Billion Net Zero AI Data Center

Mark Segal February 11, 2025

YEAR IN REVIEW ARTIFICIAL INTELLIGENCE

Home » AI » Report urges AI sustainability as energy concerns grow

ergy hog.

Report urges AI sustainability as energy concerns grow

ould outweigh any

By Jack Aldane on 17/02/2025 | Updated on 17/02/2025

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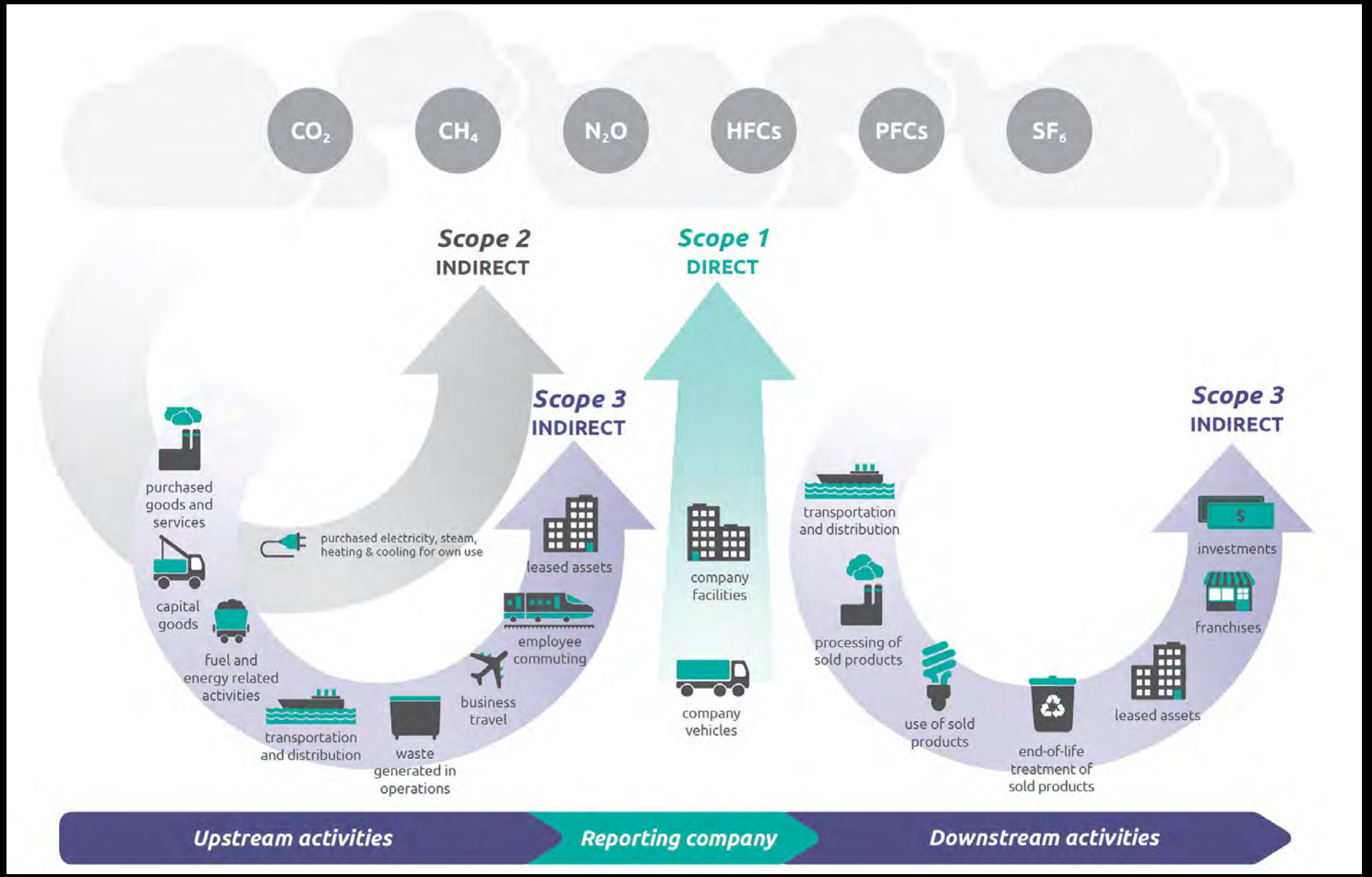

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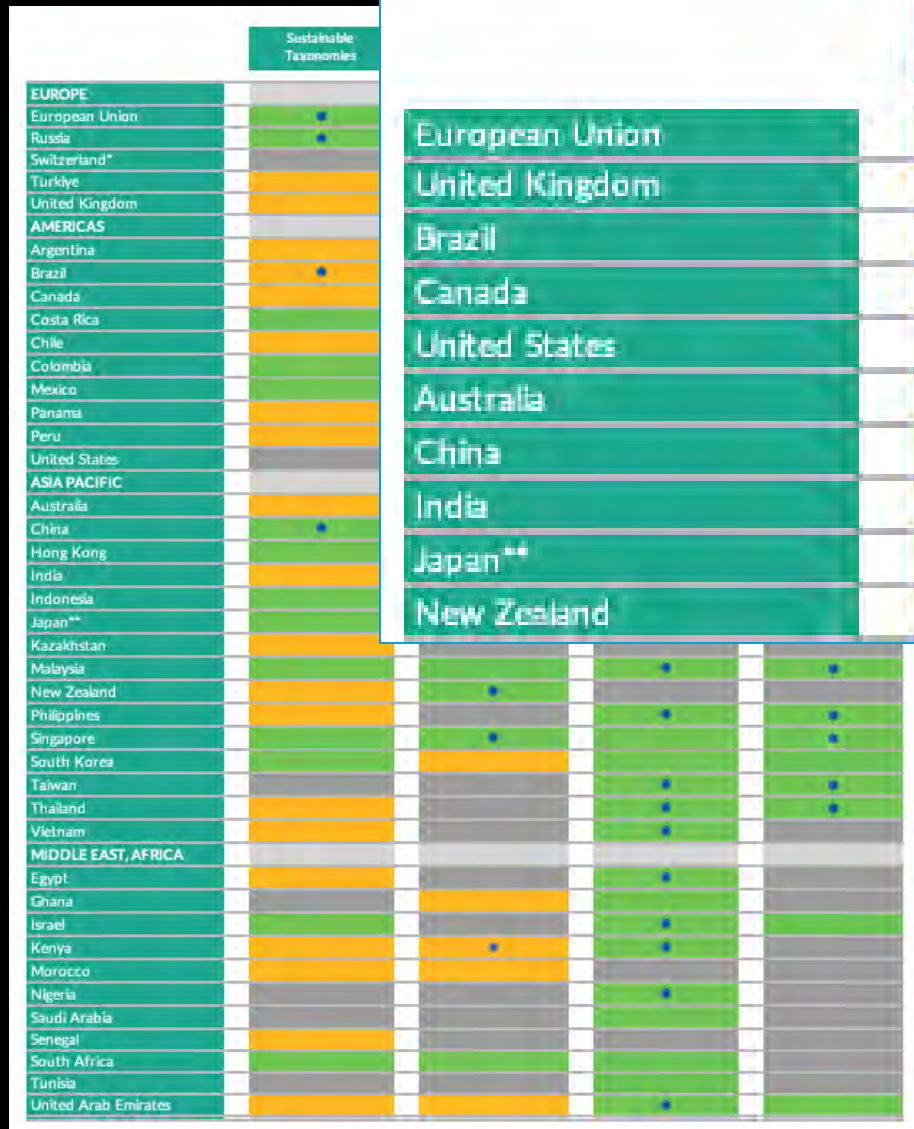

Source: Sustainable Fitch's ESG Regulation and Reporting Standards Tracker, September 2024 Update

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EU CSRD is Here

IMPLEMENTATION TIMELINE

	EU Firms (and large non-EU subsidiaries)			Global firms
Report due	2025 Based on FY 2024 data	2026 Based on FY 2025 data	2027 Based on FY 2026 data	2029 Based on FY 2028 data
Scope	Companies already subject to NFRD, including (i) large listed firms (500+ employees) and public interest entities; and (ii) banks/ insurance firms	Non-SME/micro listed companies, and large private companies with 2 or more of: · 250+ workers · €50m+ net turnover · €25m+ assets	Listed SMEs that have: · <250 workers · <€50m net turnover · <€25m assets	Non-EU companies with €150m net turnover in EU (in each of last 2 years), and either (i) a large or listed subsidiary* or (ii) a significant EU branch**
Required standards	ESRS		Simplified ESRS reporting standards	Simplified ESRS reporting standards
Reporting level	One consolidated report added to the management section of your annual financial report in electronic reporting format, to be available in the public European Single Access Point			The subsidiary or branch is responsible for publishing CSRD reports for non-EU undertakings at a consolidated group level

* Large subsidiary = 2 or more of: 250+ workers; €50m+ net turnover; €25m+ assets
** Significant branch = generating €50m in revenue

Credit: Watershed

- Scope 3 includes the entire supply chain, including many small-medium sized, private companies
- Scope 3 can represent up to 90% of total emissions

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In the US, SEC Rulings are Likely to Fall

- March 2024
  - Climate-related disclosure rules for U.S. public companies,
  - Reporting on climate risks and plans to address those risks
  - Financial impact of severe weather events
  - Greenhouse gas emissions for Scope 1 and 2
- Legal challenges paused the ruling
- As of January 2025, Acting SEC Chairman is seeking to postpone ruling, pending further review

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SB 253: CA Climate Corporate Data Accountability Act for emissions reporting
SB 261: CA Climate-Related Financial Risk Act for reporting climate-related risks

Sept 2023 — SB 253 and SB 261 pass the California State Legislature

Oct 2023 — Governor Gavin Newsom signs both bills into law

Jan 2024 — Rulemaking process, public commentary, regulatory guidance taken

Jan 2025 — Implementation date of both laws

Jan 2026
- SB 253: Companies must begin reporting Scope 1 and 2 emissions
- SB 261: Companies must submit climate-related financial risk reports

Jan 2027
- SB 253: Reporting expands to Scope 3 emissions
- SB 261: Ongoing compliance with risk disclosure requirements

SB 253: Applies to all US businesses, with revenues over $1B doing business in CA
SB 261: Applies to all US businesses, with revenues over $500M doing business in CA

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European Accessibility Act

Improve access to content on

- E-commerce platforms
- Computers and operating systems
- Payment terminals and self-service kiosks
- Mobile phones and other digital communication tools
- **Online video streaming and TV services**
- Banking services
- Telephone services
- eBooks

EAA adopted in 2019.

Enforcement begins June 2025.

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AI in Action

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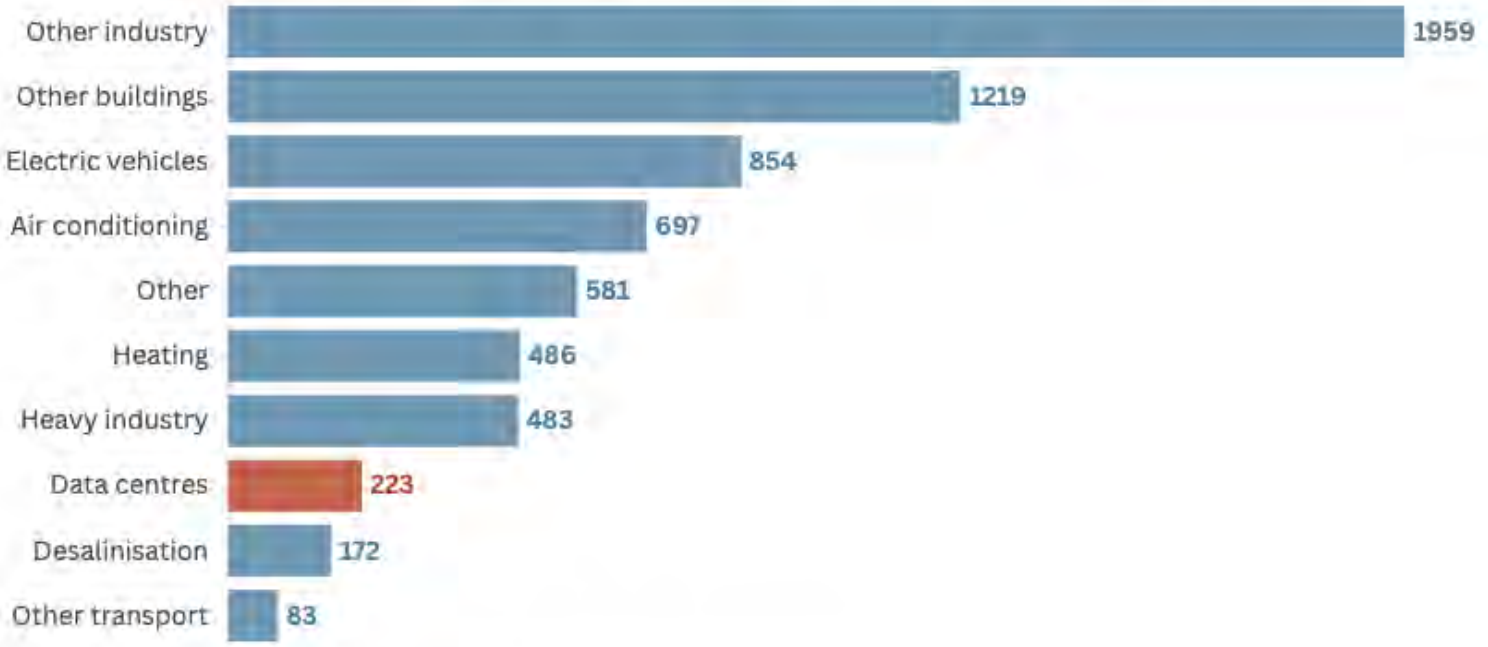
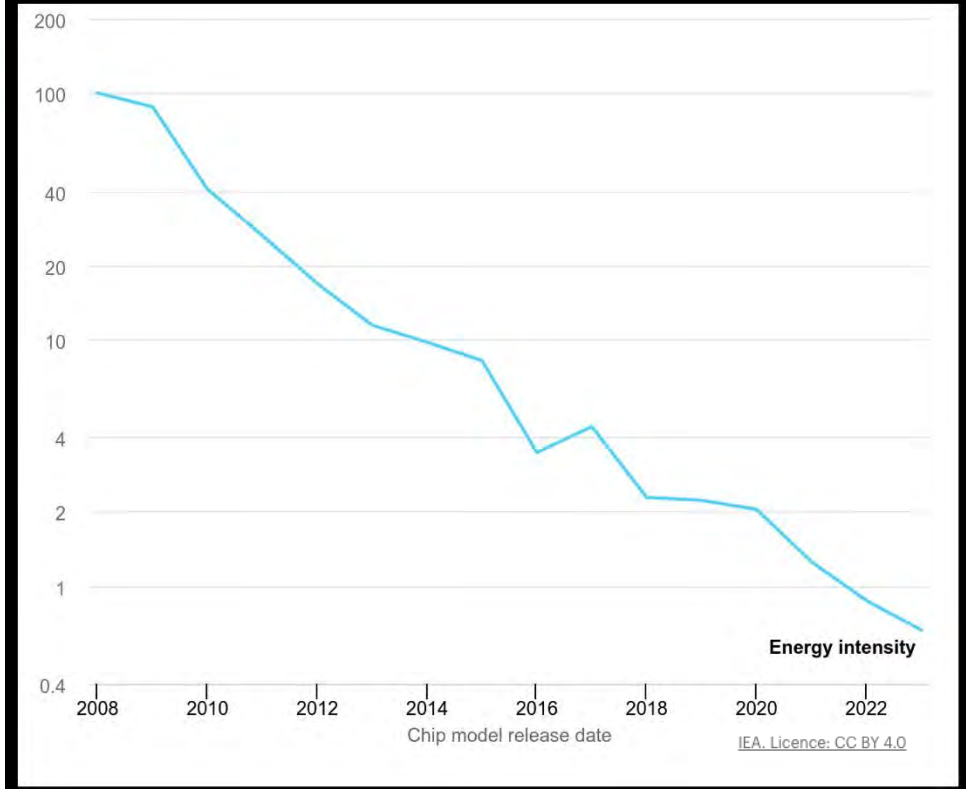
Projected growth in global electricity demand from 2023 to 2030

Projections from the International Energy Agency (IEA) based on stated policies. Measured in terawatt-hours (TWh).



Source: International Energy Agency (IEA). World Energy Outlook 2024.

Efficiency improvement of AI related computer chips, 2008-2023



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Optimizing electricity use

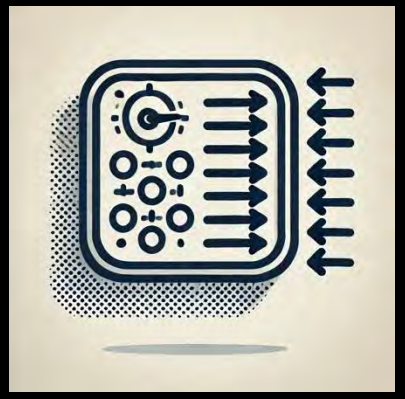
Maximizing resources and utilities

Removing plastic waste from oceans

Driving efficiency in transportation

Optimizing agriculture outcomes

Improving water management



Enhancing indoor climate control

Making appliances smarter

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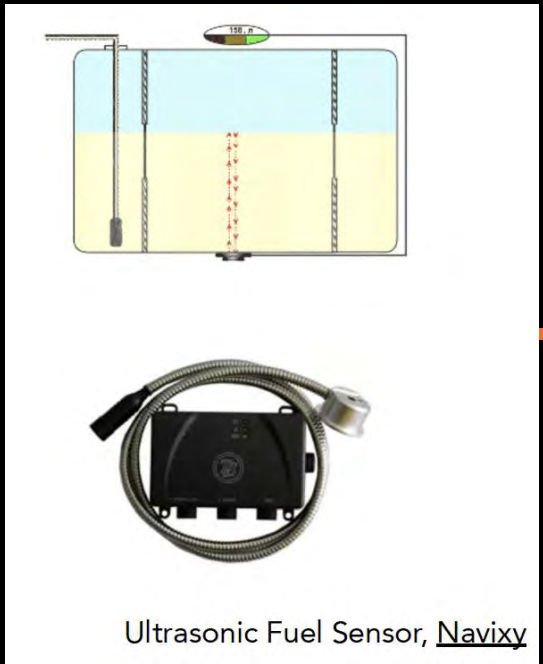
Managing Fuel and Utility Waste



Ultrasonic Fuel Sensor, Navixy

Reduces waste, saves money

Source: Optimizing Sustainability in U.S. Film Production with IoT Devices and AI
An Interactive Media Business Capstone Paper
Emma Blosser, NYU Shanghai

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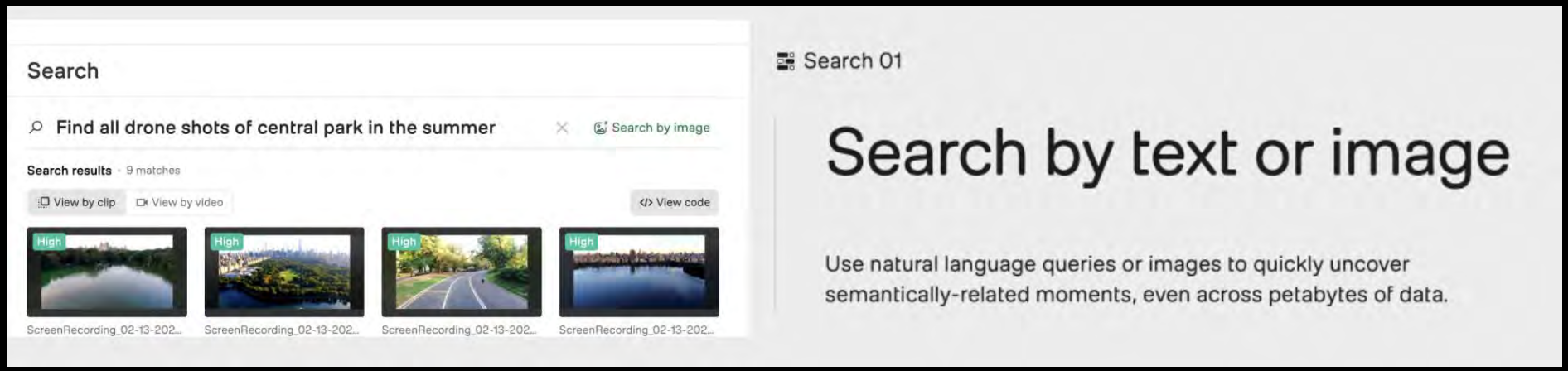
Powerful Video Search

Reduces need for re-shoots, saving time, money, transportation



Source: Twelve Labs

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Localization

More efficient, accurate and makes content more accessible to a wider audience

Source: EBU

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Predictive Maintenance

Extends life of equipment

Source: Holli and Hardbricks

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Managing Streaming

Increase efficiency

On congestion control and bandwidth estimation: server-side optimizations for ABR streaming

Dylan Gageot, Tuan Tran, Christoph Neumann, Guillaume Bichot
Broadpeak
France

Presented at the Mile High Video Conference, February 2025

Source: Broadpeak

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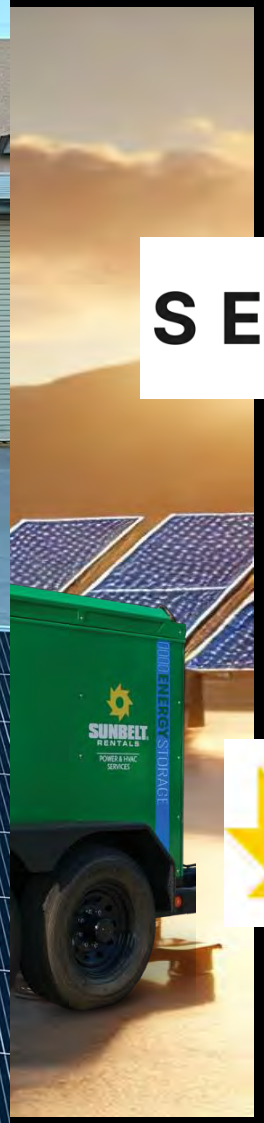

SET ZERO

SUNBELT® RENTALS

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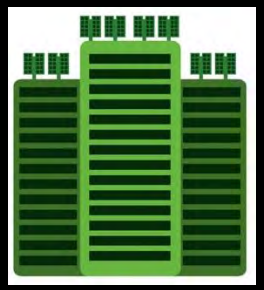
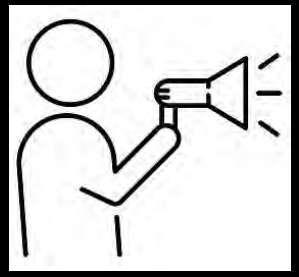
Measure and report your sustainability metrics, starting with the DPP Commitment to Sustainability Assessment

Adopt tools for energy and resource optimization, institute lifecycle management policies



Actively seek and transition to renewable-power for data centers, batteries, transportation

Demand green suppliers and hold them to account



Educate, advocate, <u>celebrate</u> sustainability actions and achievements

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Let’s connect!

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Thanks to Cedric Lejuene for his contributions to this presentation.

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