WEKA

Reimagining Data Infrastructure:

Powering the Future of Sustainable AI

The Rise of AI Technologies Threatens Environmental Progress

Sustainable development "meets the needs of the present without compromising the ability of future generations to meet their own needs." [1]

"By 2025, without AI sustainability practices, AI will consume more energy than the human workforce, significantly offsetting carbon-zero gains." [2]

Power & Cooling

8%
of the amount of global energy **data centers** are set to consume by 2030.

4%
of the amount of global power demand **AI** could consume by 2030[3] equivalent to the power of Argentina annually.

Each AI data center requires the same amount of power as a small city[4].

Water

4.2 Billion
gallons of water Google used in 2021[5]

5 Billion
gallons of water Google used in 2022[5]

34%
of Microsoft data centers water usage increase from 2021 to 2022[5]

Performance

Traditional data architectures compound environmental concerns by causing latency and bottlenecks in the data pipeline.

GPUs are voraciously energy-hungry and carbon-intensive, requiring a veritable ocean of streaming data to fuel them. Idle GPUs consume enormous amounts of energy and emit greenhouse gases.

70%

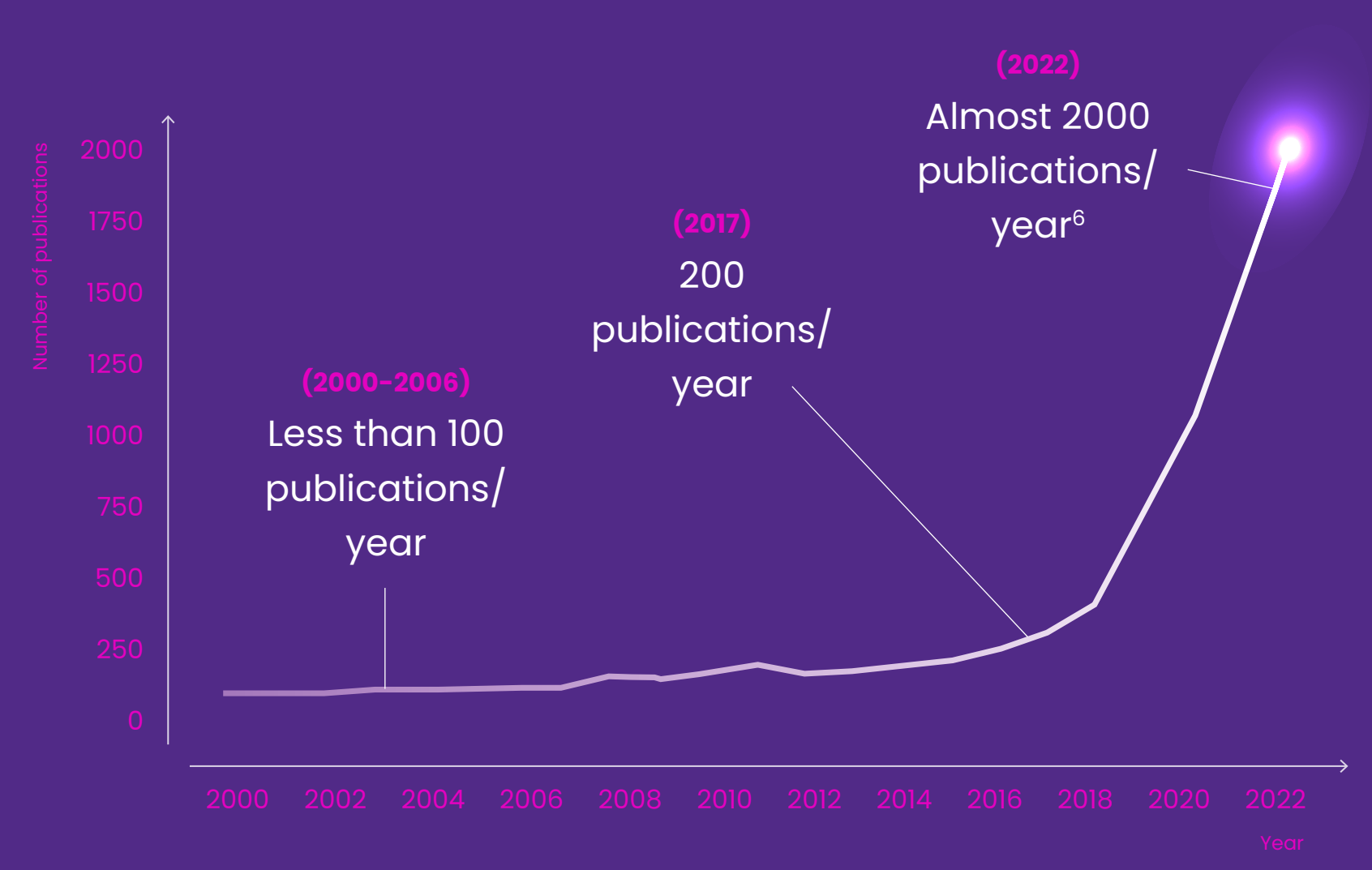
70% the amount of time a GPU can sit idle waiting for data to run on a traditional architecture.

What Drives Excessive Energy Consumption and Carbon Emissions in Data Management?

- Siloed applications
- Extensive data movement
- Oversizing an environment to meet performance goals

The Tide Is Changing

Keywords related to "Sustainable AI" are appearing in more often in research



68%
of organizations are concerned about the impact of AI/ML on their use of energy and their carbon footprint.

74%
of organizations see sustainability as a critical or important driver for moving workloads to the public cloud

45%
of organizations are measuring the impact of their IT infrastructures

45%
of organizations are monitoring their current carbon footprint with innovative technologies

30%
of organizations are executing a formal program that's driving significant impact

WEKA Advances Sustainable AI Innovation

The WEKA® Data Platform removes barriers to data-driven innovation through its advanced, high-speed software architecture optimized to solve complex data challenges, drive improved AI/ML and HPC stack efficiencies, and reduce the overall data infrastructure footprint.

How Does WEKA Foster Sustainable Data Management?

- Reduce Data Footprint
- Reduce Carbon Footprint
- Optimize GPUs

The WEKA Data Platform is a zero-copy, zero-tune solution that allows you to store data only once, reducing wasteful idle and waiting time.

260 tons
of CO2e per PB saved compared to a traditional data architecture.

10x-50x
better AI/ML stack efficiency reducing annual GPU operating energy.

4x-7x
less data infrastructure footprint with data copy reduction and cloud elasticity.

20x
GPUS for greater efficiency.

7x-8.4x
Read performance efficiency with 7x less rack space and up to 8.4x less power draw.

10x-12x
Write performance efficiency with 10x less rack space and up to 12x less power draw.

1,820 CO2e
potential carbon savings for a typical WEKA customer with over 7 PB of data over the course of the life cycle.

Learn more about how the WEKA Data Platform powers AI workloads with exceptional performance and efficiency.

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1/ https://link.springer.com/article/10.1007/s43681-021-00043-

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3/ https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/101623-power-of-ai-wild-predictions-of-power-demand-from-ai-put-industry-on-edge

4/ https://www.forbes.com/sites/forbesbusinesscouncil/2024/02/01/ais-energy-appetite-meeting-the-demand-for-innovation/?sh=156bdc5946d1

5/ https://e360.yale.edu/features/artificial-intelligence-climate-energy-emissions

6/ https://link.springer.com/article/10.1007/s43681-023-00323-3