How does Wasabi promote sustainability?

Wasabi is on a mission to store the world's data, and to do so efficiently through a combination of **purposeful software design, innovative HDD technology**, and **optimal cloud operations**. We know it's mission critical for our customers and partners to develop a sustainable IT infrastructure, so we want to help you understand and measure the environmental impact of your data stored with Wasabi.

Purposeful Software Design

Wasabi's service is designed for the optimal power consumption and data center space efficiency. Our purpose-built software maximizes the amount of data that can be stored on a disk drive. This approach helps reduce the number of power-consuming and heat-producing disk drives used for its storage service.

Innovative Hardware Technology

Wasabi's hardware innovations are critically important to environmental impact. Wasabi utilizes high-capacity HDDs in all storage regions and is quick to qualify and deploy higher capacities when they become available. Each increase in drive capacity represents a significant drop in C**N**2e per Terabyte of storage. Given that the majority of cloud storage carbon footprint is related to HDDs and their enclosures, taking advantage of the latest HDD technology and associated capacity improvements is key to the reduction of Greenhouse Gas (GHG) emissions.

Wasabi also makes extensive use of virtualization and container technologies that allow it to operate many system functions across shared hardware elements rather than dedicated hardware for each function. This approach allows Wasabi to reduce the amount of power and space consuming hardware in Wasabi data centers.

Wasabi's HDDs consume just 5.8 watts per TB during idle operation - How?

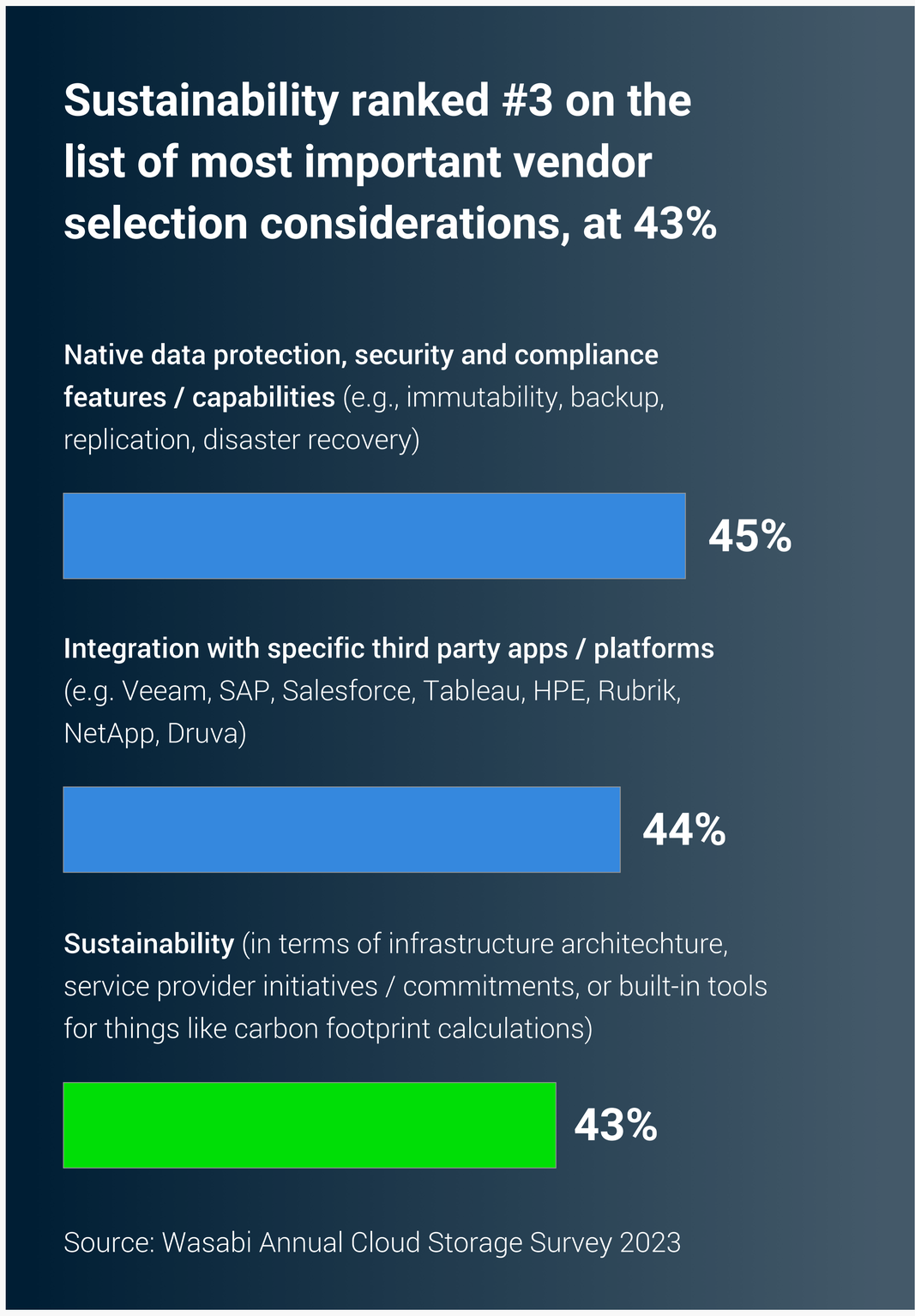
The HDDs used by Wasabi are hermetically sealed with helium, which is one-seventh the density of air. The less dense atmosphere enables thinner disks and more of them, boosting HDD capacity over previous-generation HDDs. Less air friction also means less power required to spin the disks and less air turbulence for higher reliability.

> To better understand the positive impact of higher capacity HDDs, let's look deeper at the math. An 18 TB HDD provides roughly 30% more capacity with roughly the same power requirement as a 14 TB HDD. Higher capacity HDDs mean lower GHG emissions by reducing supporting hardware and system level costs when compared to lower capacity HDDs. For example, a Wasabi storage region using 18 TB HDDs vs. 14 TB HDDs can require 22% less rack space while consuming 21% less power per TB at idle.

Optimal Cloud Operations

Wasabi storage regions are engineered to be incredibly efficient. We use the maximum possible density in specialized equipment racks to drive down energy consumption, enable cooler operating temperatures, and better control airflow - all of which reduces Wasabi's carbon footprint and keeps operational costs low.

Unlike larger, hyperscale cloud vendors, which typically build their own data centers impacting land, water usage, and air quality, Wasabi deploys our service in existing top-tier colocation facilities. These colocation facilities provide the same power, space, and security capabilities as a hyperscale data center but allow Wasabi to cost effectively consume power and space that expands with our service growth without environmental impact. Our data center partners including Equinix, NTT, Flexential, Digital Realty, and Iron Mountain, are leaders in data center sustainability and are working consciously to minimize their carbon footprint and reduce energy consumption.



Comparing On-premises Storage to Wasabi Cloud Storage

By Wasabi's calculations, using the identical power sources and methods, Wasabi is up to **2.6 times** more energy efficient than the more widely deployed on-premises object storage solutions. The calculation is inclusive of all components of the Wasabi storage regions including switches, routing, and cooling. On-premises configurations differ widely so they were not included. This difference is the result of the architecture and infrastructure that is described above.

When factoring in data center facility efficiency, Wasabi's data center partners are typically over **3 times more energy efficient** than on-premises data centers. This additional advantage is due to its more efficient data centers with much stronger Power Usage Effectiveness (PUE) because of cooling methods and a leaner electrical infrastructure that introduces lower losses to power distribution. However, in the spirit of making a true head-to-head comparison, Wasabi does not assume on-premises enterprise data center carbon intensity.

Calculate your Carbon Footprint with Wasabi

Wasabi offers a carbon footprint calculator to provide an estimate of the CO2 emissions for data stored in Wasabi for 365 days.

The calculation is based on "actual" storage which is inclusive of Wasabi redundancy technologies used to provide eleven 9s of data durability. Additionally, the carbon footprint calculator includes all components of the Wasabi storage region including servers, drives, enclosures, switching, routing, and cooling. Estimate your CO2 emissions.