



# Data Centre and Virtualization

## Green IT's Gravity of Environmental and Economic Factors Strikes the Perfect Balance for Sustainable Enterprise Storage

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### Biography

Eric Herzog is the Chief Marketing Officer at Infinidat (<https://www.infinidat.com>). Prior to joining Infinidat, Herzog was Chief Marketing Office and Vice President of Global Storage Channels at IBM Storage Solutions.

His executive leadership experience also includes: CMO and Senior VP of Alliances for all-flash storage provider Violin Memory, and Senior Vice President of Product Management and Product Marketing for EMC's Enterprise & Mid-range Systems Division.

Eric blogs at <https://www.infinidat.com/en/blog>

**Keywords** Green IT, Environmental Social and Governance (ESG), Procurement, OpEx, CAPEX, Infinidat's E<sup>2</sup> Factor  
**Paper type** Reference

### Abstract

Research by the Enterprise Strategy Group into the relevance of environmental, social, and governance (ESG) programs in IT purchase decisions found that 93% of IT decision makers expect their suppliers' ESG programs to have a major impact on their organization's purchases, and is a clear indication that vendors serious about selling to today's corporate and government buyers will need to invest in robust ESG programs and messaging. Suppliers' ESG compliance programs matter to IT buyers, and failure to maintain these initiatives could eliminate vendors from consideration by business customers. As we reflect on the importance of environmental conservation and sustainability on Earth Day 2024, the author of this article addresses the many myths surround Green IT and explains how its adoption reduces the carbon footprint and thereby helps the environment, reduces capital and operational expenditures, and gives businesses economic value at the same as delivery environmental value.

### Introduction

Put simply, Green IT is the reduction of energy consumption and lowering of carbon emissions from the design, use, and disposal of technology products. Over the years, three myths about Green IT have slowed down efforts to make the data



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infrastructures of enterprises “greener.” For enterprises that have goals for sustainability and greenhouse gas emissions, this is a significant issue.

- **Myth #1:** “If we go green, it will cost a lot, and it won’t help us create any economic value for our business.”
- **Myth #2:** “If we purchase sustainable storage arrays, we won’t get the performance and capacity we need for our data infrastructure, and we won’t see much of a difference in reducing carbon emissions or power consumption.”
- **Myth #3:** “If we are a U.S. based company, we don’t need to be concerned about carbon emission laws in the EU or in other parts of the world.”

All of these statements are untrue – and we have the data to prove it.



As a leader in enterprise storage, Infinidat is at the forefront of Green IT, which is focused on reducing energy consumption and lowering carbon emissions from the design, use and disposal of technology solutions. We have learned that enterprises want to buy from technology solution providers, like us, that align with their green initiatives.

As we reflect on the importance of environmental conservation and sustainability on Earth Day 2024, we create sustainable storage arrays by design. Infinidat’s storage arrays use the latest in power-efficient technologies and techniques. We closely review actual power consumption data based on the powerful telemetry capabilities in our InfiniVerse® platform.



At Infinidat, we strike a balance between the capacity needs and the performance needs of our customers with the need to minimize floor space, power/cooling costs, and carbon footprint. Uniquely, there is no compromise. With a sustainable IT approach that makes enterprise storage more efficient, you're able to save money – lower Capital Expenditures (CAPEX) and Operating Expenditure (OpEx), while making your data centre greener and more environmentally friendly.

Moreover, although more “green laws” exist in the European Union than in the United States, US-centric companies, including many on the Fortune 500 list, are still subject to the rules of the EU and other countries with respect to reducing carbon emissions. If your US-centric enterprise is doing business in EMEA, you need to be complying with local regulations about carbon emissions and any pollutants that can cause harm.



Environmental, social and governance (ESG) continues to become more of a need in Request for Proposals (RFPs) and sourcing agreements: “93% of IT decision-makers expect technology suppliers’ ESG programs to have a greater impact on their organizations’ future purchase decisions,” according to the analyst firm Enterprise Strategy Group<sup>1</sup>.

### What has Infinidat done about it?

Infinidat formed a steering committee last year to review our operations, supply chain and products to ensure that our sustainability plan, initiative, and commitments align with the evolving requirements and guidelines of ESG. After extensive mapping and gap analysis, we solidified our sustainability road map and workplace, resulting in Infinidat’s first-ever ESG Report.

The study shows powerful environmental results. The data about efficiencies speaks for itself. An upgrade to the latest version of InfiniBox® showed a 42%



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reduction in power per effective PB, which means less power usage and less use of coolant chemicals. It also revealed 72% more capacity in the same footprint as previous generation arrays. Overall, a 36% improvement in ROI/TCO connected the dots between environmental value and economic efficiency.

We call it Infinidat's E<sup>2</sup> Factor – E for Economic and E for Environmental. What is good for the environment translates directly into what is good for the economic benefits of an enterprise. The two “E’s” are in a symbiotic relationship with each other when applied to energy-efficient, sustainable storage for enterprise applications and workloads.

Figure 1: Infinidat's E<sup>2</sup> Factor

- Infinidat has a strong **Economic** value
  - IDC Research White Paper
  - 1.7 to 2.7x Watts per TB better
  - 66% Better power efficiency - kWh
- Infinidat has a strong **Environmental** value
  - Consolidation of 5, 10, or 20 arrays into ONE = OpEx benefits
    - Reduces power, cooling, and floor space
    - Need to recycle 5-20 previous vendors' arrays
  - **Environmental** impact is “X” for each array consolidated to ONE rack
  - Reducing significant electricity and GHG emissions
  - At end-of-life for Infinidat solution - Recycle only ONE



Source: Infinidat

A prime example of how Infinidat delivered on the promise of this E<sup>2</sup> Factor is the enhanced version of the award-winning InfiniBox™ SSA II that we delivered in the fall of 2023. Our solution uses 50% less power (watts) per effective PB, reducing rack space, floor tiles, and the costs of power and cooling. It delivers 2x capacity in the same data centre footprint, with up to 6.635PB effective capacity. At the same time, the SSA II reduced IT storage management 50% per PB.

Competitively speaking, our Infinidat storage array has been evaluated to be between 1.7x to 2.7x more power efficient (watts/TBu) than the storage arrays of one of our leading competitors in the enterprise storage space. Infinidat's arrays are operating at reduced energy consumption, and we're able to demonstrate technically how we reduce greenhouse gas overall and carbon footprint.

In this example, our InfiniBox array was recorded as saving 174,262 watts of energy. This amount of reduced energy consumption, compared to our leading competitor, is the equivalent of eliminating the pollution of greenhouse gas from 316,589 miles driven by a gasoline-fuelled automobile, and the equivalent of the



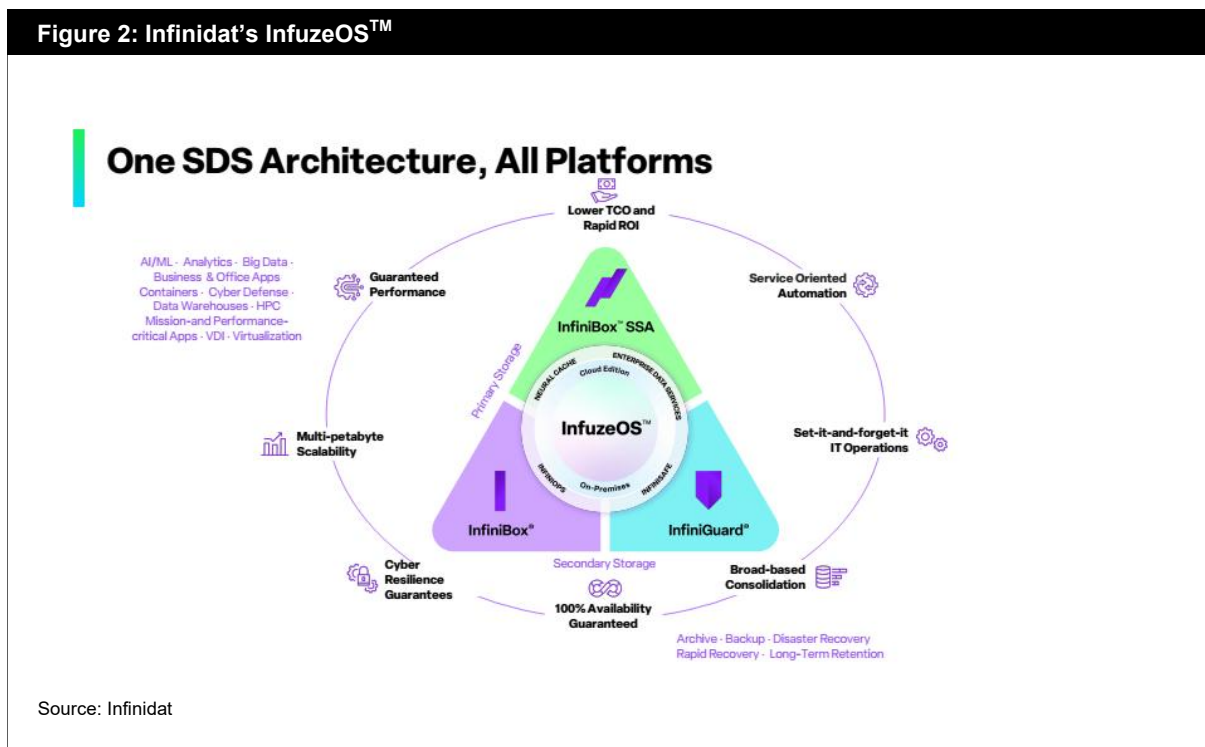
electricity used by 24 homes in a year. Data shows that 123 tons of CO2 emissions are avoided – a desirable benefit to Earth – because of the energy efficiency of Infinidat’s sustainable storage arrays. The annual savings of just the electricity with InfiniBox was determined to be more than \$27,000 – not counting other CAPEX and OPEX savings Infinidat brings through capabilities such as storage consolidation that is mentioned below.

### Path of the E<sup>2</sup> Factor

A decisive way that enterprises can unlock environmental value for the storage infrastructure is to consolidate several arrays. An enterprise usually finds itself ready for storage consolidation when it is experiencing storage sprawl, which is an overloaded storage infrastructure caused by years of bringing in a different array for one or two workloads at a time in a piecemeal fashion.

To address the issue, our unique software-defined storage architecture, called InfuzeOS™, along with our Neural Cache, supports diverse, modern workloads across on-premises and cloud environments, enabling our customers to consolidate 5 or 10 or 20 arrays down to a single Infinidat storage platform.

Figure 2: Infinidat’s InfuzeOS™



Independent analyst firms have validated our claims. For one, the 2023 GigaOm Radar Report for Primary Storage: Large Enterprises stated that “Infinidat offers large enterprise features and a balanced AI-based architecture that enables users to consolidate a wide range of workloads in a single system and deliver a consistent performance experience.”



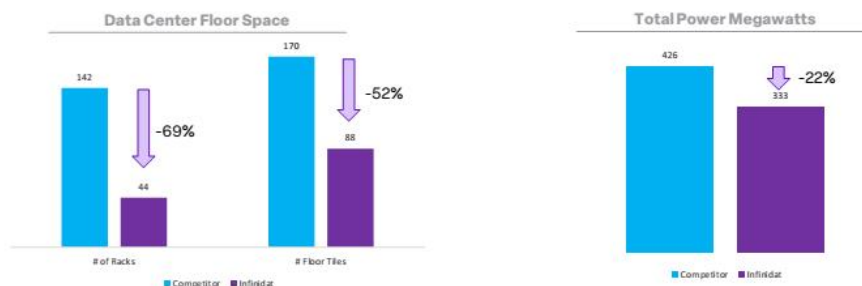
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This consolidation generates savings on power, cooling and floor space, creating a greener IT environment and making substantial reductions in electricity consumption and greenhouse gas. In addition, recycling, which has an effect on the environment, is decreased by consolidating. It's like the planet vs. storage sprawl (too many arrays to power and then recycle). With Infinidat, you don't have to recycle the sprawl of 5 or 10 or 20 storage arrays. At the end of the lifecycle, you just have to recycle one Infinidat array.

On a much larger scale, a Fortune 200 financial services company replaced hundreds of storage arrays from a competitor with a fraction of the number of InfiniBox hybrid arrays and InfiniBox SSA all-flash arrays. The total power megawatts went from 436 to 333 – a 22% decrease in energy consumption because of Infinidat's solution. Additionally, there was a 69% decrease in the number of racks and a 52% reduction in floor tiles, all because of Infinidat. Less watts, fewer slots, fewer floor tiles! This represents clear OpEx benefits from our Infinidat solutions.

Figure 3: Real world example

- Fortune 200 Financial Services replaces >100 competitor arrays with 38 InfiniBoxes and 6 InfiniBox SSAs



Source: Infinidat

The global analyst firm IDC is quoted publicly as reporting, "Infinidat's advantages to workload consolidation at scale add up to a significantly lower Total Cost of Ownership (TCO) than the more traditional practice of using multiple storage siloes."

Strong economic value from our solutions has been documented and explained in an IDC Research White Paper<sup>2</sup>, including the following findings about real-world InfiniBox customer implementations: 48% reduced overall OpEx; 162% Return On Investment (ROI) over five years; \$1.29 million annual average benefit per system, and last but not least, payback of an InfiniBox purchase for enterprise storage in only 11 months.



Now, add the power efficiency coefficient. Infinidat is 66% more power efficient than its enterprise-class storage competition. Power efficiency equates to OpEx savings for a better TCO. We have also seen Infinidat customers reduce floor space usage by over 80% and improve TCO by over 70%.



### Savings in the data centre

You can determine your own company's electricity savings with increased power efficiency by using our Electricity Cost Calculator<sup>3</sup> on the Infinidat website, so you can use your exact storage configuration to determine your own annual energy savings for your OpEx.

With Infinidat, you will obtain a significant difference in improving power consumption efficiency and, ultimately, reducing carbon emissions. See our recent webinar [https://info.infinidat.com/Green\\_IT-EN\\_Webinar\\_Recording\\_LP.html](https://info.infinidat.com/Green_IT-EN_Webinar_Recording_LP.html) for more information on the secret to super savings in the data centre.

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